



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



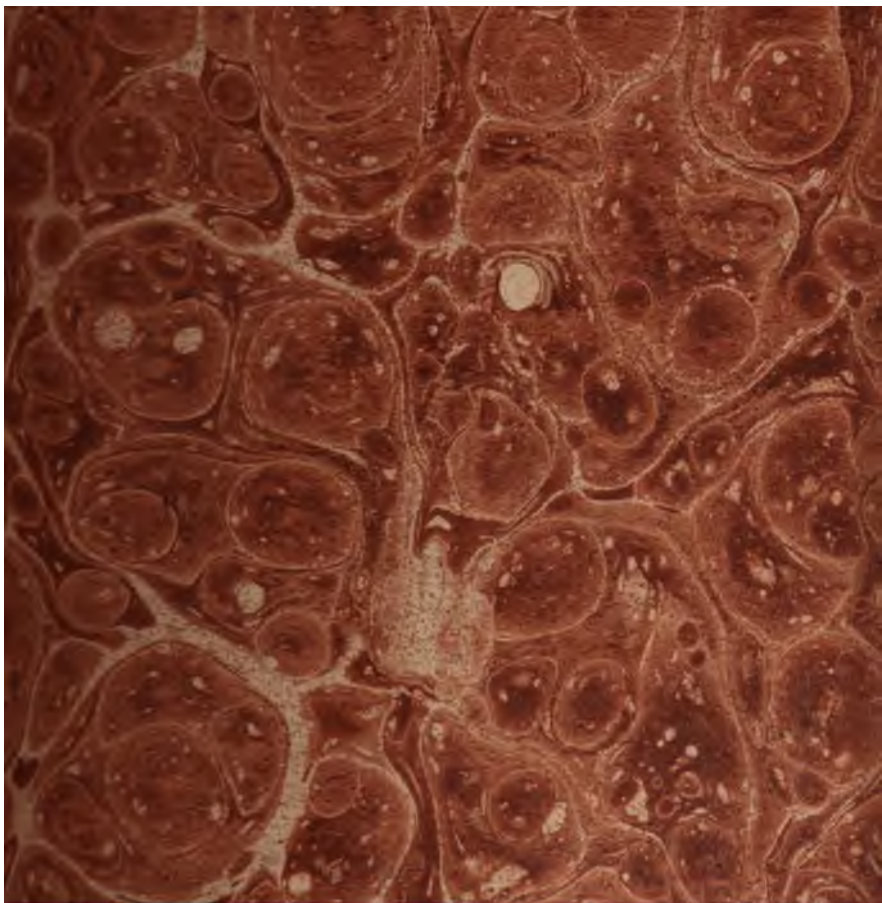
G. 69. B. 20.



E. BIBL. RADCL.

14 8
B 1
11

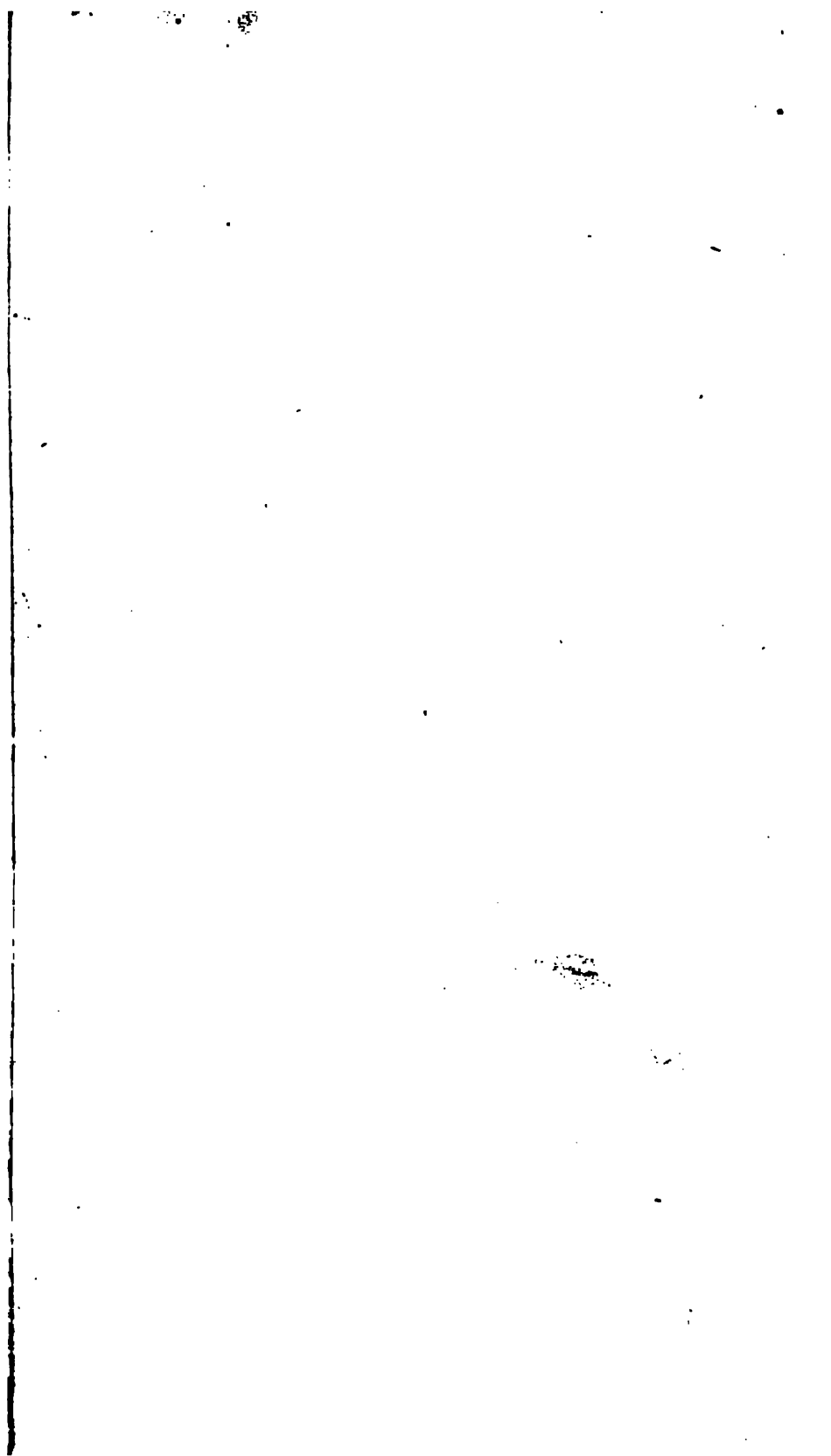
~~60 B.~~





6000155250

191315 d. 48





ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,
AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,
OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES
OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN,
PHILADELPHIA, AND THE NAT. HIST. SOCIETIES
OF PARIS AND MOSCOW;
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

— "VIRESCERE ACQUIRIT EUNDO." — *Virg.*

VOL. XI.

LONDON:

PRINTED BY R. TAYLOR AND CO., SHOE-LANE, FLEET-STREET;
And sold by the Proprietor, J. SOWERBY, at No. 2, Mead Place, Lambeth;
by Messrs. WHITE and Co., Fleet-street; JOHNSON and Co., St. Paul's
Churchyard; SHERWOOD, NEELY, and JONES, Pater-noster-
row; and by all Booksellers, &c. in Town and Country.

MDCCCX.

KNOX BOTANY

CHURCH STREET

1891

THE KNOX BOTANY CLUB
HAS THE HONOR TO ANNOUNCE

THAT IT HAS

BEEN ELECTED

TO HOLD AN ANNUAL MEETING
ON FRIDAY, SEPTEMBER 12, 1891,
AT THE KNOX BOTANY CLUB,
CHURCH STREET, KNOX,
VIRGINIA.

TRAGOPOGON pratensis.

*Yellow Goat's-beard.**SYNGENEISIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* simple, of many leaves. *Down* feathered.

SPEC. CHAR. Calyx about equal to the corolla. Leaves undivided, carinated, long-pointed; broad and a little undulated at the base. Flower-stalk cylindrical.

SYN. *Tragopogon pratense.* Linn. *Sp. Pl.* 1109. *Huds.* 335. *With.* 672. *Relh.* 290. *Sibth.* 236.

T. luteum. *Raii Syn.* 171.

NOT unfrequent in grassy pastures and meadows, flowering in June.

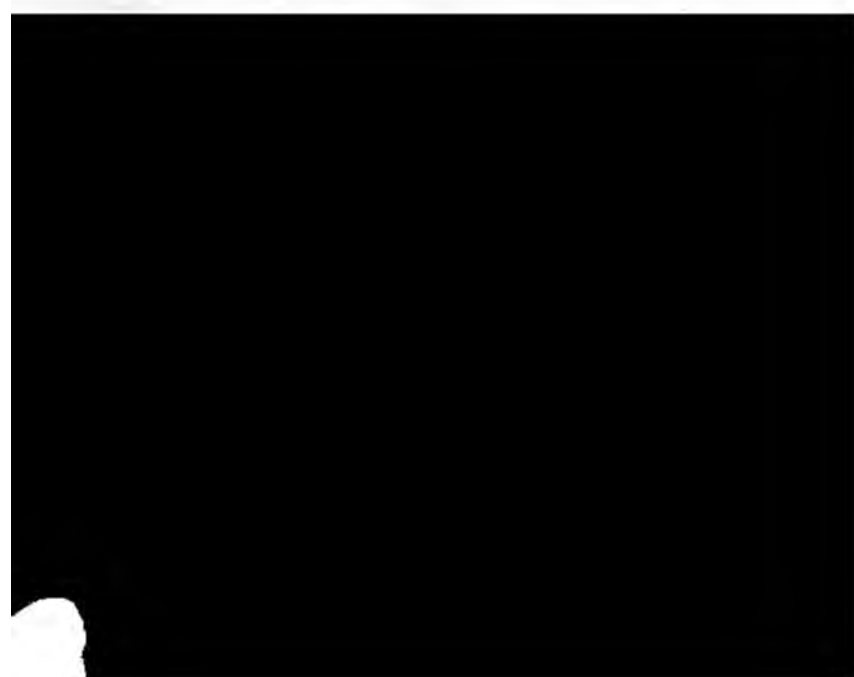
Root biennial, tapering, abounding with milk but not acrid. Whole herb smooth. Stems several, branched, 18 inches or 2 feet high, leafy, round, often purplish; the branches being elongated into a simple naked flower-stalk, which is of an equal thickness throughout. Leaves alternate, sessile, some of them radical, others embracing the stem and branches, carinated, all broad and somewhat inflated at the base, but terminating in a long narrow point; very generally the margin towards the bottom is more or less waved or crisped. Flowers solitary, terminal, large and handsome, opening at day-break, and closing before noon, unless (as Mr. Relhan observes) the weather be cloudy. Calyx-leaves equal, though ranged alternately, or in two rows. Florets generally as long or longer than the calyx, yellow, with brownish nerves, especially on the upper side, the outermost row much longer than the rest. Antheræ brown or purplish. Germen with a tuft of hairs at the summit. Seed-down radiated and feathered, standing on a foot-stalk. Seed crooked, furrowed and roughish.

Such is our plant, which in so many respects agrees with the character, and even with the specimen, of Linnæus's *T. orientale*, that we are not sure of their being distinct; yet there can be still less doubt of ours being his *T. pratense*. In fact, the length of the outer florets is very variable.

All botanical writers, except Professor Jacquin, make *Tragopogon* of the neuter gender; but we see no reason why long use should perpetuate so manifest an error, as its derivation, as well as the best authorities, justifies its restoration to the masculine.



1867. 1877. Published by J. C. G. & Co. London



TRAGOPOGON porrifolius.

Purple Goat's-beard.

SYNGENESIA *Polygamia-aqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* simple, of many
leaves. *Down* feathered.

SPEC. CHAR. Calyx half as long again as the corolla.
Leaves entire, straight. Flower-stalk swelling
upwards.

SYN. Tragopogon porrifolium. *Linm. Sp. Pl.* 1110.
Huds. 335. *With.* 672. *Hull.* 172.

T. purpureum. *Raii Syn.* 171. *Ger. em.* 735.

GATHERED by Mr. Sowerby in the meadows below St.
Vincent's rocks, Bristol. It is biennial, and flowers in May
and June.

Root long, tapering. Whole plant abounding with a milky
juice, which soon turns to a brown resin, from the evaporation
of its watery particles. Herb smooth, glaucous, about a foot







PICRIS echioides.

Bristly Ox-tongue.

SYNGENESIA *Polygamia-aequalis.*

GEN. CHAR. *Receptacle* naked. *Cal.* double; the inner equal; the outer lax. *Dorsum* feathery. *Seeds* transversely rugged.

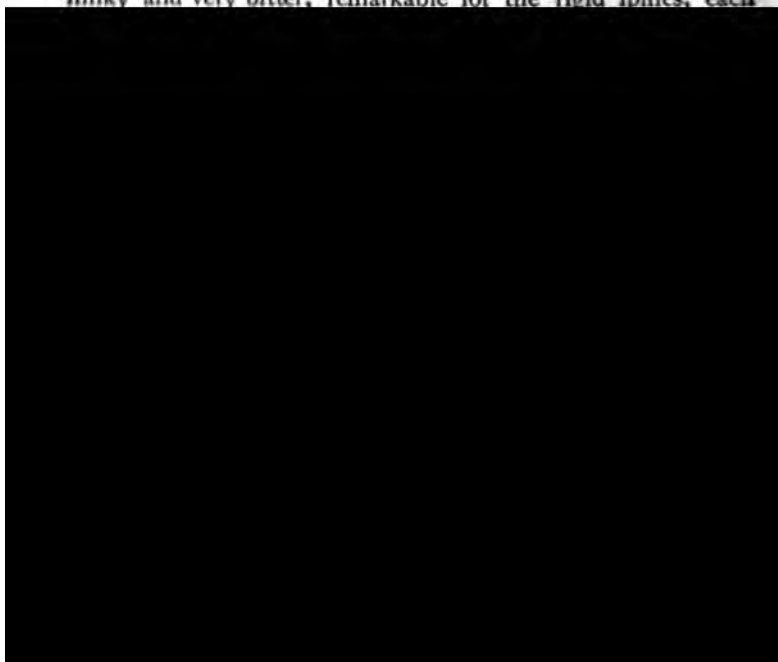
SPEC. CHAR. Outer calyx of five very large prickly leaves. Seed-down stalked. Leaves waved.

SYN. *Picris echioides.* *Linn. Sp. Pl.* 1114. *Sm. Fl. Brit.* 814. *Huds.* 342. *With.* 673. *Hall.* 172. *Relb.* 297. *Sibth.* 240. *Abbot.* 168. *Curt. Lond. fasc.* 3. t. 51.

Hieracium echioides, capitulis Cardui benedicti. Ravi Syn. 166.

FOUND about hedges, borders of fields and banks, principally on a clay or loamy soil, flowering in June and July, but it is not a plant of general occurrence. About London it seems to be more frequent than in Norfolk. We have however seen it in unusual abundance in the grounds of Edward Rigby, Esq. at Frammingham near Norwich, and by Wrongay church 5 miles from Lynn.

Root annual, tap-shaped, often branched. Herb rather milky and very bitter, remarkable for the rigid spines, each







(196)

P I C R I S hieracioides.

Hawkweed Ox-tongue.

SYNGENESIA *Polygamia æqualis.*

GEN. CHAR. *Receptacle* naked. *Cal.* double. *Down* more or less feathery. *Seeds* rugged.


SPEC. CHAR. *Calyx* lax. *Leaves* mostly undivided. *Flower-stalks* furnished with scales up to the calyx.

SYN. *Picris hieracioides.* *Linn. Sp. Pl.* 1115. *Witb. Bot. Arr.* 830. *Relb. Cant.* 297.

Hedypnois hieracioides. *Huds. Fl. An.* 342.

Hieracium asperum majori flore in agrorum limitibus. *Raii Syn.* 167.

THIS occurs abundantly about the borders of fields in a gravelly or calcareous soil, flowering in July and August. It is a plant of rude growth and not very attractive appearance. The root, we believe, is perennial, or at least biennial; stem much branched, three feet high; the branches furrowed, purple







SONCHUS cæruleus.

*Blue Sow-thistle.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flowerstalks and calyx bristly, racemose. Leaves somewhat lyrate; their terminal lobe triangular and very large.

SYN. *Sonchus cæruleus.* *Camer. Epit.* 281. *Sm. Fl. Brit.* 815. *Hull. ed.* 2. 227.

S. canadensis. *Linn. Sp. Pl.* 1115. *With.* 674.

S. alpinus. *Huds.* 336. *Fl. Dan. t.* 182. *Willd. Sp. Pl. v.* 3. 1519.

S. flore cæruleo. *Ger. em.* 294.

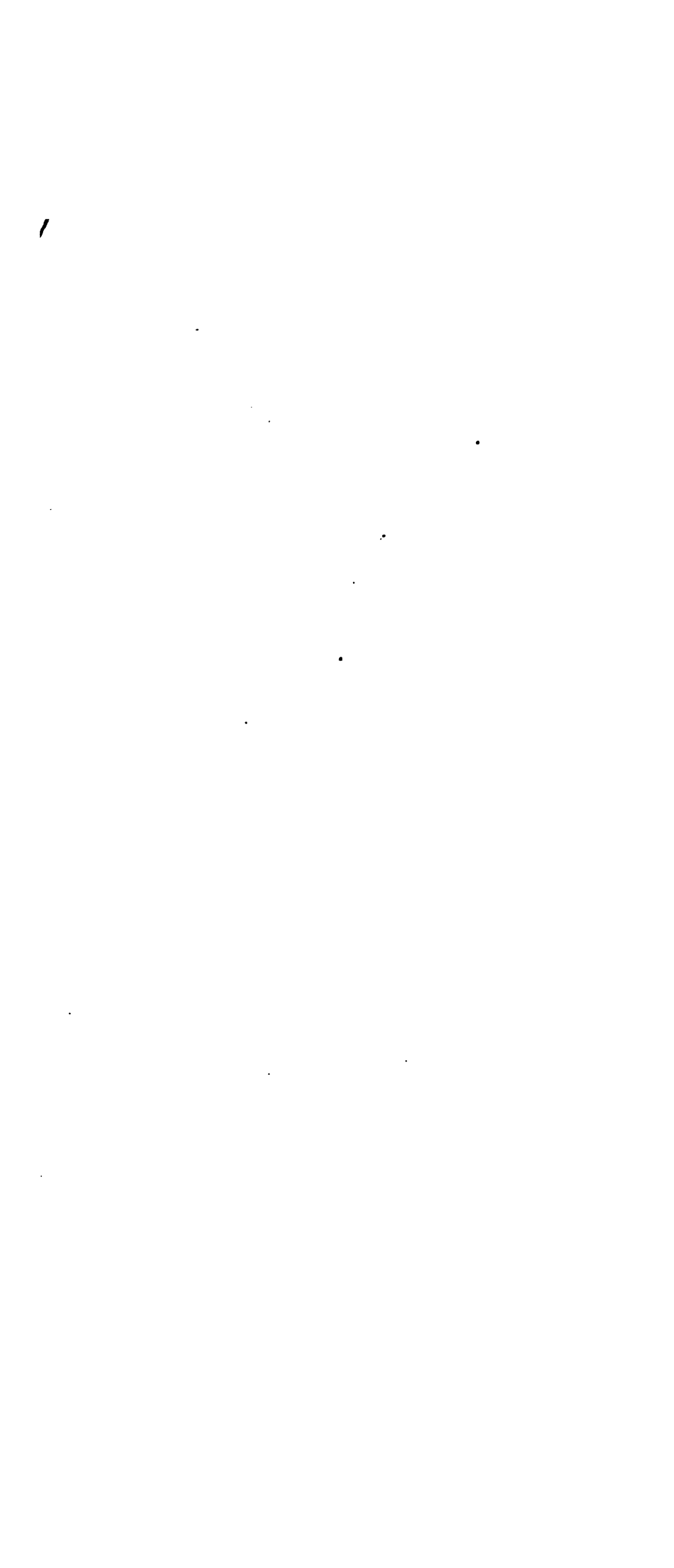
THE beautiful Blue Sow-thistle of the Alps has found a place in the list of British plants, on the authority of Wallis's History of Northumberland, which turns out to be totally unworthy of regard, for Mr. Winch assures us his plant is only *Cichorium Intybus*! Fortunately however the genuine *Sonchus cæruleus* was discovered on the Aberdeenshire mountain of Lochnagore, by Mr. G. Don, who in September 1801 sent us the leaf delineated in our plate.

This species is perennial, flowering in July and August. The stems are a yard high, erect, simple, leafy, each terminating in a long irregular cluster of large purplish-blue flowers, whose stalks, calyx, and narrow bractæas, are clothed with red prominent viscid bristly hairs, not unlike the pubescence of a rose. Leaves alternate, variously lyrate, with a very large, pointed and toothed, triangular terminal lobe, and clasping the stem with their dilated base. They are smooth and dark green above; glaucous beneath, with many veins and a hispid rib.

2425.



Specimen published by J. R. Smith, Esq.



SONCHUS palustris.

Tall Marsh Sow-thistle.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flower-stalks and calyx bristly, somewhat umbellate. Leaves runcinate, arrow-shaped at the base, rough in the margin.

SYN. *Sonchus palustris*. *Linn. Sp. Pl.* 1116. *Sm. Fl. Brit.* 816. *Huds.* 337. *With.* 674. *Hull.* 177. *Relb.* 292. *Curt. Lond. fasc.* 5. t. 59.

S. tricubitalis, folio cuspidato. *Raii Syn.* 163.

GATHERED by Mr. Groult on the banks of the Thames between Greenwich and Woolwich, late in July last. The plant from which our specimen was taken measured 7 feet in height, it being the largest of the Syngenesious class, and perhaps the tallest herbaceous plant, climbers excepted, that this country produces.

Mr. Curtis has well distinguished this species from the *arvensis*, see v. 10. t. 674, in opposition to the opinion of Haller. *S. palustris* has a perennial, fleshy, and branched, but not a creeping root. The whole herb is twice or thrice as large as in the *arvensis*, though the flowers are rather smaller, and generally a little paler. The stem-leaves are longer, and their base is arrow-shaped, terminating in a pair of long narrow divaricating lobes, instead of being heart-shaped. Their margin is minutely toothed. The panicle assumes nearly the shape of an umbel or cyme, varying in the number of flowers: its stalks, as well as the calyx, are rough with dense short black glandular hairs or bristles, in which respect, as well as in the seeds and their down, it much agrees with *S. arvensis*.





[33]

SONCHUS palustris.

Tall Marsh Sow-thistle.

SYNONYMS: *Propaganda*.

Gen. CHAR. Herbage erect, often branched,
twining as the base. Leaves entire, ovate,
Spec. CHAR. Flower stalks and calyx hairy, base
white umbellate. Leaves numerous, crowded
at the base, rough on the margin.
Stem. Branches pubescent. Leaves 1/2 inch, 3/4
1/2 inch and 1 inch long. Petals 1/2 inch, 1/2 inch,
1/2 inch. Corolla tube 1/2 inch, 1/2 inch.
St. peduncles like the calyx. Head 1/2 inch.

CATHERINE, Esq. M. D. on the bank of the River
between Lymington and Wexham, has a large field of
plant from which our specimens were taken. The plant
is being the largest of the kind in the field.

SONCHUS arvensis,

Corn Sow-thistle.

SYNGENESIA *Polygamia-æqualis.*

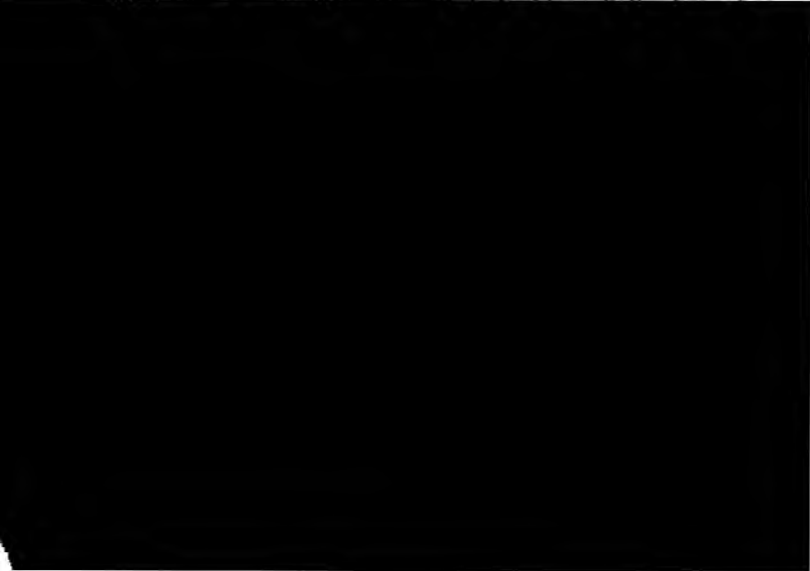
GEN. CHAR. *Receptacle* naked. *Cal.* imbricated, swelling at the base. *Dæcn* simple, sessile.

SPEC. CHAR. Flower stalks and calyx bristly, somewhat umbellate. Leaves runcinate, denticulated, heart-shaped at the base. Root creeping.

SYN. *Sonchus arvensis.* *Linn. Sp. Pl.* 1116. *Huds.* 337. *Wub.* 674. *Hall.* 177. *Relb.* 291. *Sibth.* 237. *Abbot.* 169. *Curt. Lond. fasc.* 4. t. 53.

S. repens, multis *Hieracium majus.* *Raii Syn.* 163.

THIS is a common and pernicious weed in corn-fields, though not of so general occurrence as the *S. oleraceus*. It is perennial, flowering in July and August.



674



Erigeron philadelphicus L.



SONCHUS oleraceus.

Common Sow-thistle.

SYNGENESIA *Polygamia-æqualis.*

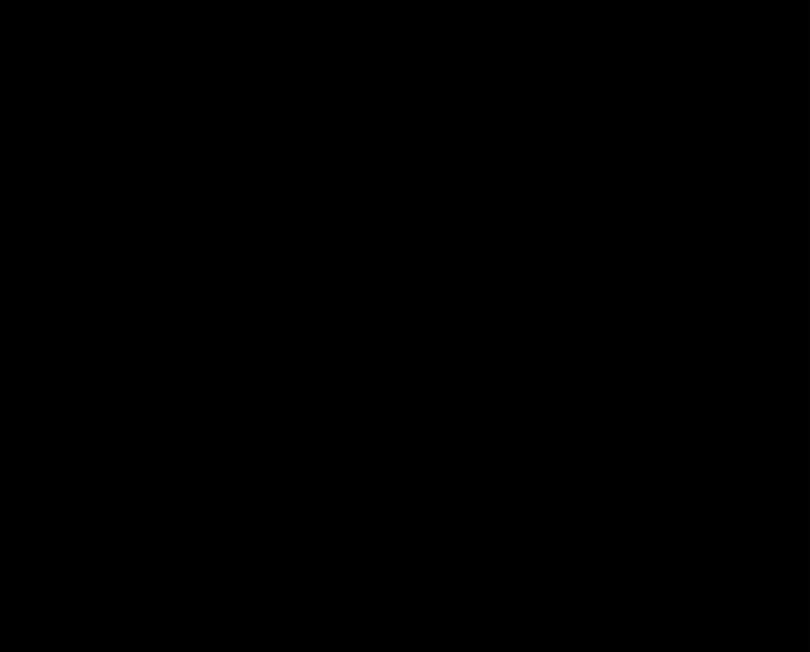
GEN. CHAR. *Receptacle* naked. *Cal.* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flower-stalks cottony. Calyx smooth. Leaves runcinate, toothed.

SYN. *Sonchus oleraceus.* *Linn. Sp. Pl.* 1116. *Sm. Fl. Brit.* 818. *Huds.* 336. *With.* 675. *Hull.* 177. *Relb.* 291. *Sibth.* 237. *Abbot.* 169. *Curt. Lond. fasc.* 2. t. 58.

Sonchus n. 1—6. *Raii Syn.* 162, 163.

ONE of the most common of all weeds in every kind of cultivated land; and like such vagrant annuals it assumes a variety of forms according to the variations of soil and moisture. The flowers are to be met with from midsummer to the end of autumn.





Salicaria officinalis



[1957]

LACTUCA virosa.
Strong-scented Lettuce.

SYNGENESIA *Polygamia-æqualis*.

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* simple, on a foot-stalk.

SPEC. CHAR. Leaves horizontal, finely toothed; their keel prickly.

SYN. *Lactuca virosa*. *Linn. Sp. Pl.* 1119. *Sm. Fl. Brit.* 819. *Huds.* 337. *With.* 677. *Hull.* 175. *Relh.* 305. *Sibth.* 237. *Lightf.* 429. *Woodv. Suppl. t.* 250.

L. sylvestris major, odore opii. *Raii Syn.* 161; and *L. sylvestris folio non laciniato. ib.* 162.

THIS, the largest of our wild lettuces, grows on open sunny chalky banks and old flint walls, and sometimes on dry gravelly banks. Our specimens were collected near Mackerell's tower, Norwich, and at Battersea. It is biennial, and flowers from the end of July to the middle of September.

The whole plant abounds with a white milky juice, smelling like opium and possessing the same narcotic qualities. It issues suddenly in large drops from the calyx and more tender leaves on the slightest touch. The stem is erect, wand-like, round, sparingly leafy, prickly, brown or reddish, paniced at the summit. Leaves smoothish, rather glaucous, finely and sharply toothed; the radical ones numerous, obovate, undivided; the rest smaller, clasping the stem, more or less waved or sinuated. Main rib in all beset with straight parallel prickles. Floral leaves heart-shaped, pointed. Flowers small, palish yellow; their stalks bearing many small bracteas. Calyx smooth. Seeds furrowed. Down rough.

Petiver's figures induce us, with Dr. Stokes, to refer both the above plants of Ray to this species, though the latter of the two is mentioned in the *Synopsis* as if it belonged to *L. Scariola*, t. 268.

1357



Illustrated by J. J. Smith, London.

LACTUCA Scariola.
Prickly Lettuce.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* simple, on a foot-stalk.

SPEC. CHAR. Leaves perpendicular; their mid-rib prickly on the back.

SYN. *Lactuca Scariola.* *Linn. Sp. Pl.* 1119. *Huds. Fl. An.* 338. *With. Bot. Arr.* 834. *Relb. Cant.* 293.

L. sylvestris costa spinosa. *Raii Syn.* 161.

GATHERED wild by the Rev. Mr. Hemsted near Denny Abbey between Cambridge and Ely. It grows among rubbish and on waste ground in other parts of that country, but rarely elsewhere, flowering in August.

Root biennial, very full of milky juice, as is every part of the plant. Stem erect, 2 or 3 feet high, round, prickly, leafy, branched at the top into a sort of panicle, consisting of numerous pale-yellow flowers. Leaves embracing the stem, toothed and prickly in the margin, their main rib set with numerous parallel spines along the back; the lowermost deeply lobed and sinuated; those on the stem turned perpendicularly, and not horizontal as in most plants. Calyx smooth. Flowers small. Seed furrowed lengthwise.

This species, though bitter, acrid and fœtid in some degree, is much milder than the more common Wild Lettuce (*Lactuca virofa*), and may easily be distinguished from that by its paler colour altogether, its less spreading flower-branches, and its vertical leaves.

Dr. Stokes has exceedingly well observed that Hudson's variety β belongs to *L. virofa*.

THE HISTORY OF

The History of the

The History of the

The History of the

The History of the

The History of the

The History of the

The History of the

The History of the

LACTUCA Scariola.

Prickly Lettuce.

SYNGENESIA *Polygamia-aqualis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, cylindrical, with a membranous margin. *Down* simple, on a foot-stalk.

SPEC. CHAR. Leaves perpendicular; their mid-rib prickly on the back.

SYN. *Lactuca Scariola.* *Linn. Sp. Pl.* 1119. *Huds. Fl. An.* 338. *With. Bot. Arr.* 834. *Relb. Cant.* 293.

L. sylvestris costa spinosa. *Raii Syn.* 161.

GATHERED wild by the Rev. Mr. Hemsted near Denny Abbey between Cambridge and Ely. It grows among rubbish and on waste ground in other parts of that country, but rarely elsewhere, flowering in August.

Root biennial, very full of milky juice, as is every part of the plant. Stem erect, 2 or 3 feet high, round, prickly, leafy, branched at the top into a sort of panicle, consisting of numerous pale-yellow flowers. Leaves embracing the stem, toothed and prickly in the margin, their main rib set with nu-









THE LITERATURE

of the

of the

of the

of the

of the

PRENANTHES muralis.

Ivy-leaved Lettuce.

SYNGENESIA *Pygmaea-aqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* double. *Down* simple, nearly sessile. *Florets* in a single row.

SPEC. CHAR. *Florets* five. *Leaves* runcinate.

SYN. *Prenanthes muralis.* *Linn. Sp. Pl.* 1121. *Huds.* 338. *Walt.* 673. *Reib.* 293. *Sibth.* 238. *Curt. Lond. bot.* 5. t. 58.

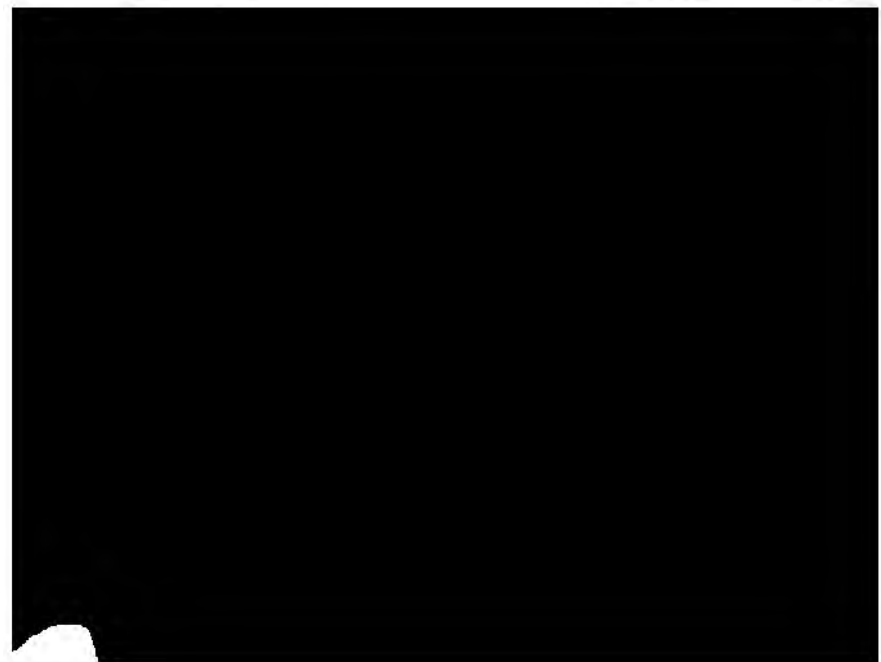
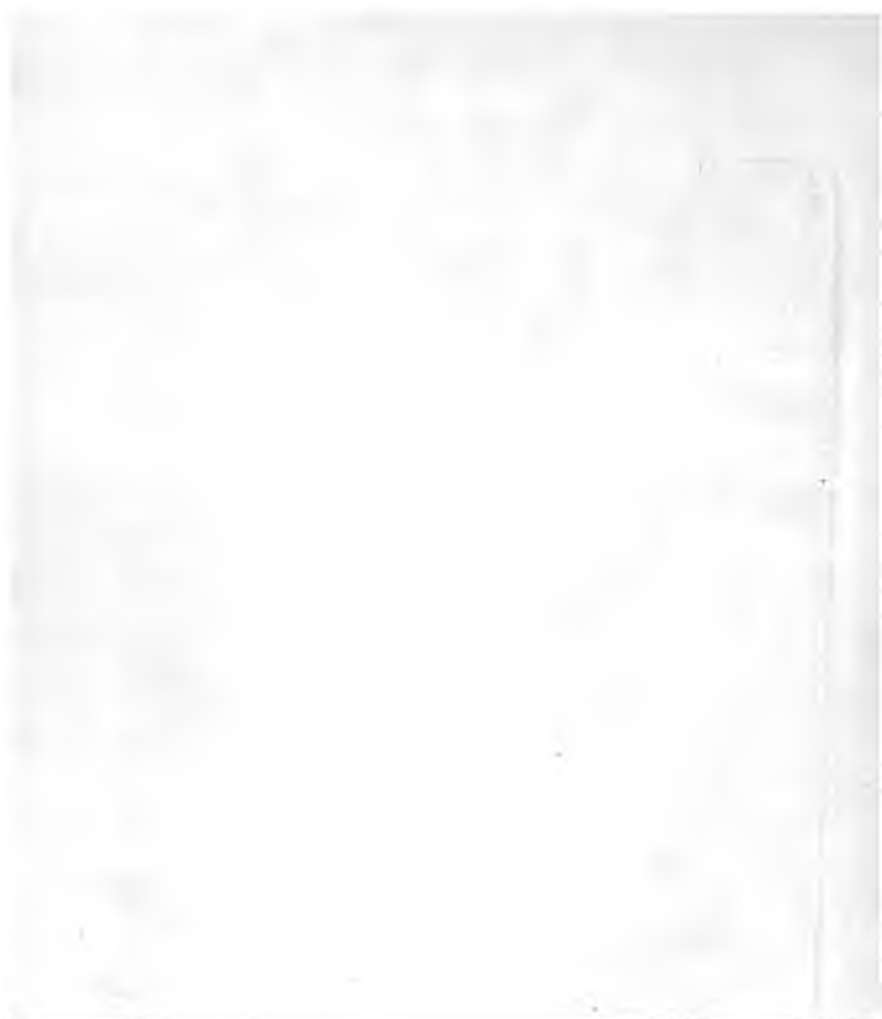
Lactuca sylvestris murorum flore luteo. *Raii Syn.* 162.

AUTHORS generally mention this as rather a rare plant. Its proper station is in woods on a chalky soil, but it also occurs on the tops of walls, growing in the mortar, especially on the north side or under the shade of trees. The Rev. Mr. Hemsted gathered this specimen on Chippenham Park wall, Cambridgeshire, in July last. It grows in Bishopgate-street, Norwich.

Root perennial, of several long fibres. Whole herb tender and brittle, smooth, milky when broken. Stem a foot high, erect, simple, round, purplish, leafy; zigzag and panicked at



Senecio jacobaeae (L.) J. Presl



LEONTODON Taraxacum.
Dandelion.

SYNGENESIA *Polygamia æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated,
with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx reflexed.
Leaves runcinate, toothed, smooth.

SYN. *Leontodon Taraxacum.* Linn. *Sp. Pl.* 1122.
Huds. 339. *Relh.* 294. *Curt. Lond. fasc.* 1. t. 58.
Woodr. Med. Bot. t. 3.

L. officinalis. *With.* 679.

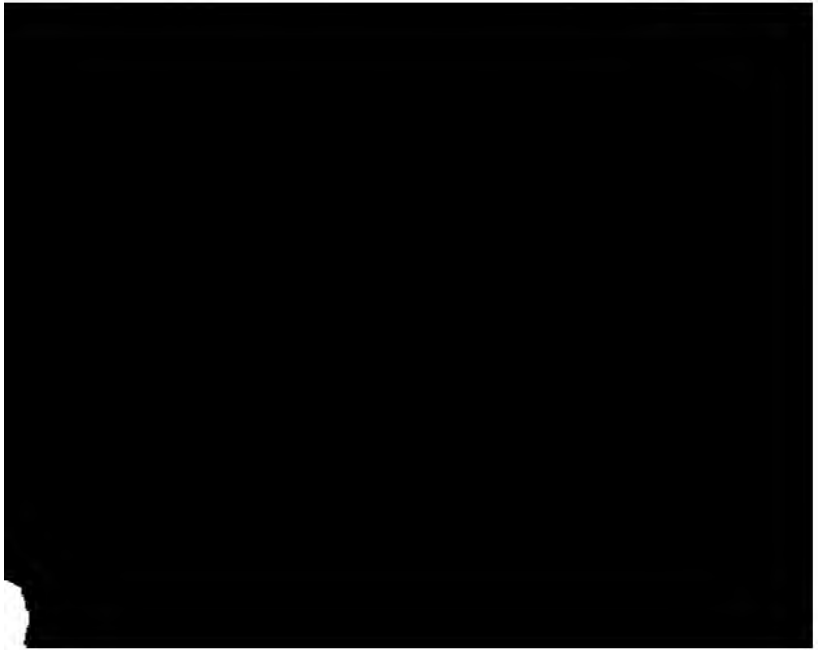
Taraxacum officinale. *Sibth.* 239.

Dens leonis. *Raii Syn.* 170. n. 1. also 171. n. 2.

THE Dandelion is too common to be overlooked by the most incurious botanist; it clothes our meadows with yellow early in the spring, and may be found in bloom throughout summer in waste or ill-cultivated places. The root is perennial, deep and branching, rendering it a troublesome weed. Leaves



Herb. 1794. Collected by P. Bouché, Linn.



LEONTODON palustre.

*Marsh Dandelion.**SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* imbricated with flaccid scales. *Down* simple, on a footstalk.

SPEC. CHAR. Outer scales of the calyx shorter, upright, ovate. Leaves sinuated and toothed, nearly smooth.

SYN. *Leontodon palustre.* *Lyons. Fasc.*

L. *Taraxacon.* *With.* 679. *Huds.* 339 β .

IN the present volume, *t.* 510, we have expressed an opinion that this plant was merely a variety of the common Dandelion; but since that article was written, a more accurate examination of wild specimens, as well as of others raised from seed sent from Cambridgeshire by the Rev. Mr. Hemsted, has convinced us of our error, and we therefore lose no time to acknowledge it.

The Marsh Dandelion grows generally on moors or wet commons. It was originally observed on Hinton Moor, Cambridgeshire, and has been found on the Lower Common at Heydon, Norfolk, by the Rev. Mr. Bryant, flowering in June or July.

Root perennial, tap-shaped. Whole herb more slender and delicate than the common species. Leaves very various, slightly hairy, often quite smooth, scarcely runcinate, or with their teeth pointing backwards, but more or less deeply pinnatifid and dentate. Flower bright yellow, externally striped with red or purple. Calyx scales gradually smaller outwards, and all erect, or rather closely pressed to each other, the lower ones ovate, not linear. Head of seeds about half the size of *L. Taraxacum*. The calyx scales being none of them reflexed, and the leaves being less runcinate, distinguish it from the most starved varieties of the *Taraxacum*, such as the β of Hudson figured by Petiver, *t.* II. *f.* 8.





HEDYPNOS *hirtum*.*Deficient Hedypnois.*SYNGENESIA *Polygamia-æqualis*.

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks single-flowered. Leaves dentate, rough. Calyx nearly smooth. Outer row of seeds destitute of down.

SYN. *Hedypnois hispidum* β. *Huds.* 340.

Leontodon hirtum. *Linn. Sp. Pl.* 1123. *With.* 682. *Sibth.* 238. *Curt. Lond. fasc.* 6. t. 59.

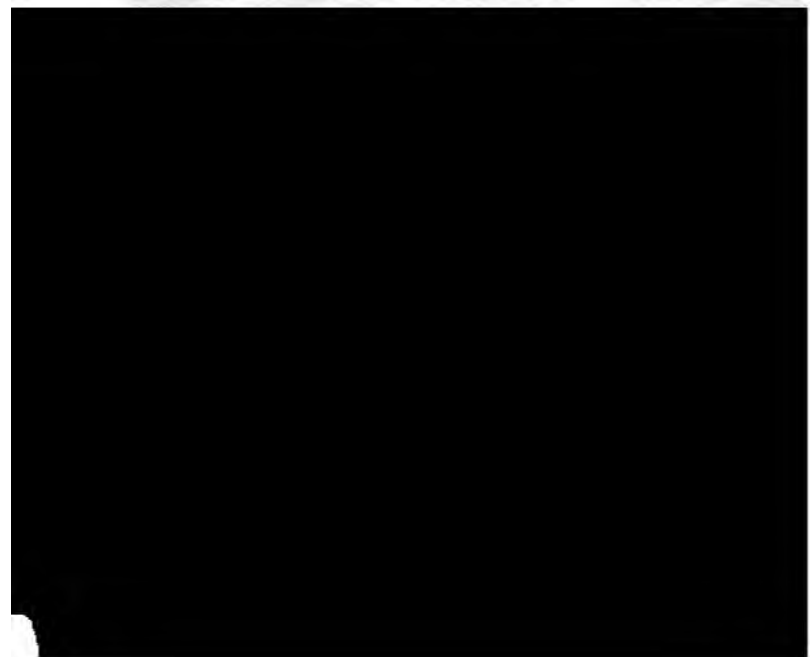
Hieracium pumilum saxatile asperum, præmorsâ radice. *Raii Syn.* 167.

MANY botanists have doubted whether this were a different species from the *H. hispidum*. Mr. Hudson makes them varieties only, but Linnaeus always insisted on their being distinct. Unfortunately the character he pointed out is fallacious, the simple hairs; for the pubescence of both is occasionally simple, forked, or even three-pointed. In herbage they nearly agree, or at least the varieties of each closely approach each other. The flowers of both droop in the bud, but those of *H. hirtum* are the smallest. The calyx is very nearly smooth. The florets are destitute of the yellow hairs at their orifice, and of the brown glands at the back of their apex, and the innermost have a less perfect corolla than those of the circumference; while on the contrary the seeds produced by the innermost are crowned with large sessile feathery down, and those of the circumference are almost beardless, having only a few short jagged scales at their summit. The root of this species is bitten off, not tapering as in the other.

This *Hedypnois* is frequent on gravelly heaths and commons, flowering in July and August. Mr. Curtis observes that it seldom occurs on the same spot with the preceding.

We adopt this genus of *Hedypnois* from Mr. Hudson. What Jussieu and Gærtner have called by the same name is the *Zacyntha* of Schreber's *Gen. Pl.* 534.





HELYPNOIS lepidum.

Rangū Helypnōis.

HYGISTHIA *Polygona opposita.*

GEN. CHAR. *Herzog* annual, punctate. Cal. imbricated, with series at the base. Dors. feathery, sessile, unequal.

SPERM. CHAR. Stalks single-flowered. Leaves dentate, rugose. Filaments hairy at their orifice, glandular at the top.

SYN. *Helypnos insignium*. *Hudl.* 340.

Leontodon insignium. *Link. Sp. Pl.* 1124. *Walt.* 681.

Relb. 225. *Sibth.* 239. *Curt. Lond. fasc.* 5. t. 56.

Dens leonis *hercules leptocaulis*, *Hieracium dictus*.

Roll. Sm. 171

PLENTIFUL in pastures, on a chalk or limestone soil more especially, flowering in July.

Root perennial, tapering, cordate, blackish. Leaves radical, oblong, tapering at the base, bluish, more or less deeply toothed, and sometimes pinnatifid, clothed with







HEDYPNOIS Taraxici.

Alpine Hedyphnois.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, dotted. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. Stalks mostly single-flowered. Leaves smooth, toothed; the teeth recurved. Calyx hairy.

SYN. Hedyphnois Taraxici. *Sm. Fl. Brit.* 825.

H. autumnale ϵ . *Hudf.* 341.

Hieracium Taraxici. *Linn. Sp. Pl.* 1125. *With.* 683.

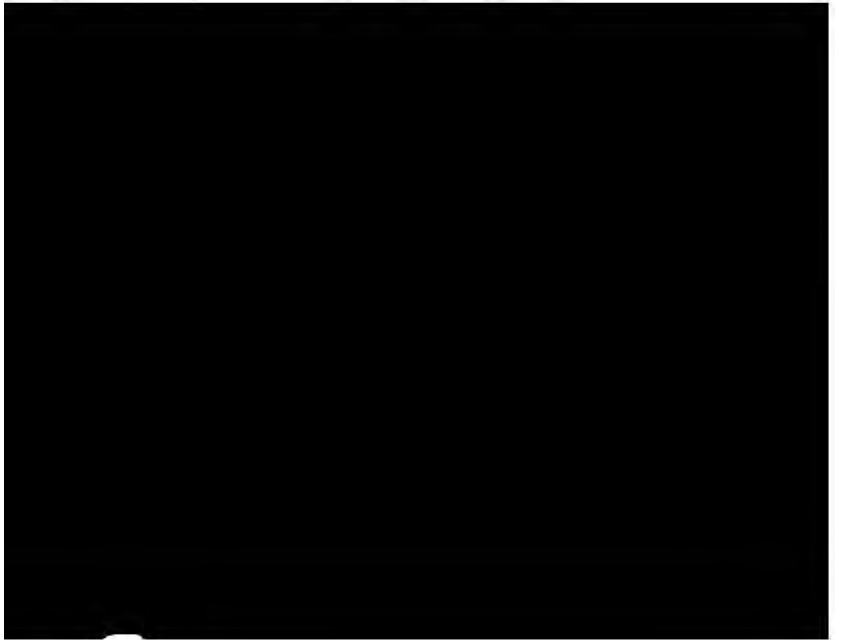
Hull. 175. *Lightf.* 435. *Dicks. H. Sicc. fasc.* 17. 15.

THE late Mr. J. Mackay, to whom we are obliged for many specimens of this rare plant, mentioned it as growing in moist places on several of the Highland mountains. Lightfoot gathered it in Skye, and Hudson in Wales, but few travellers have noticed it.

The root is perennial, abruptly bitten off, producing long simple lateral fibres, and the flowers appear in August. The herbage is variable, the leaves being either lanceolate and almost linear, or spatulate and obovate; their teeth also vary greatly in size or prominence, but are always more or less runcinate, or hooked backwards. The surface of the leaves is smooth. The stalk or stalks vary in length. Though generally simple, they are sometimes divided. They swell upwards, and there assume a dense black hairiness, continued all over the calyx. One or two awl-shaped bractæ are found on the stalk. The florets are of a full yellow, with brownish teeth at the summit. Receptacle naked. Seeds angular and rough. Down finely feathery, sessile, though the germen seems surmounted with a taper neck resembling a footstalk, but as the seed swells this appearance vanishes.

Dr. Solander, who first found a single specimen of this plant in Lapland, conceived it to be a mule production between *Hieracium alpinum* and *Leontodon Taraxacum*, but we find nothing to countenance such an opinion.





HEDYPNOIS autumnalis.

Autumnal Hedypnois.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked, punctate. *Cal.* imbricated, with scales at the base. *Down* feathery, sessile, unequal.

SPEC. CHAR. General stalk branched; partial scaly. Leaves lanceolate, toothed or pinnatifid, smoothish.

SYN. Hedypnois autumnalis. *Sm. Fl. Brit.* 826. *Huds.* 341.

Leontodon autumnale. *Linn. Sp. Pl.* 1123. *Willd.* 680.

Hull. 173. *Retz.* 295. *Sibth.* 238. *Abbot.* 170.

Hieracium minus, præmorsâ radice. *Raii Syn.* 164.

COMMON every where in meadows and pastures, flowering about August and later.

Root perennial, abruptly bitten off, furnished with very long simple fibres from its sides. Leaves almost altogether radical, lanceolate, generally smooth, rarely a little rough, variously and unequally pinnatifid or merely toothed, oblique or somewhat



Senecio jacobinae (L.) Link.



HIERACIUM alpinum.

*Alpine single-flowered Hawkweed.*SYNGENESIA *Polygamia-æqualis*.GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves oblong, undivided, entire or toothed. Stalk almost leafless, single-flowered. Calyx hairy.

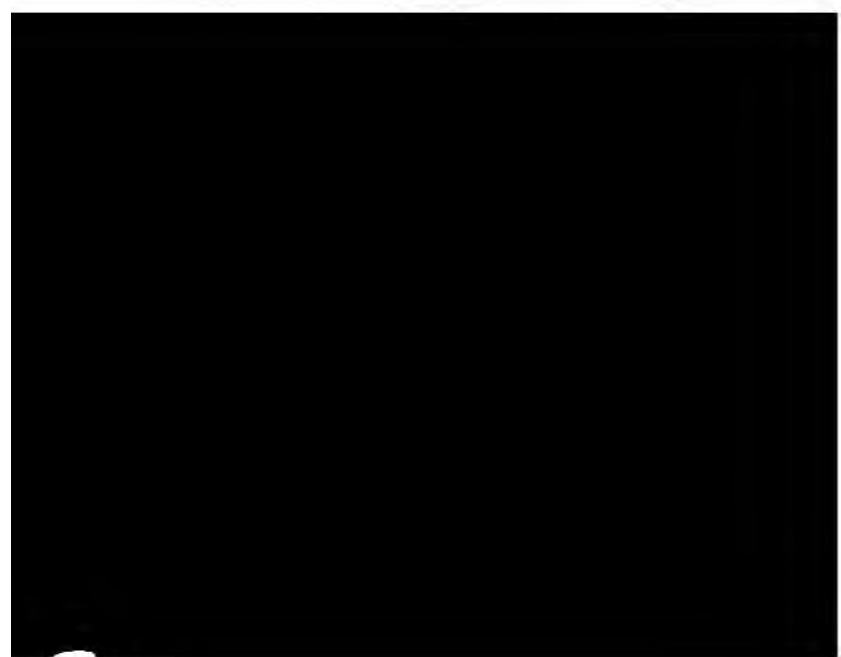
SYN. *Hieracium alpinum*. *Linn. Sp. Pl.* 1124. *Sm. Fl. Brit.* 827. *Huds.* 343. *Witb.* 683. *Hull.* 175. *Lightf.* 434. *t.* 18.*H. villosum alpinum*, flore magno singulari, caule nudo. *Dill. in Raii Syn.* 169. *t.* 6. *f.* 2.

RAY was acquainted with this plant, but took it for *Hieracium quintum villosum* of Clusius (*H. villosum* of Linnæus), an error rightly corrected by Dillenius. It grows on rocky parts of the high mountains of Wales and Scotland, flowering in July.

Root perennial, abrupt, with several long strong fibres. Whole herb clothed with prominent hoary rigid hairs, yellowish brown at their base. Leaves almost all radical, obovate, not broad, undivided, either entire or more or less toothed and undulated. Stalk solitary, erect, simple, round, darker coloured in the upper part, bearing generally one leaf near its base, and a small bractea higher up. Calyx dark-coloured and very hairy. Corolla large, of a full yellow. Tube of each floret hairy. Seeds obovate, angular, dotted. Down sessile, rough. Receptacle naked.

The fructification of this *Hieracium*, when accurately compared with *Hedynois Taraxici*, is too unlike to warrant the supposition of the latter being its hybrid off-spring, though appearances might at first sight seem to countenance such an idea. Linnæus however eagerly grasped at his ingenious pupil's suggestion, and has too positively insisted on it in his *Sp. Plant.* and *Disquisition on the Sexes of Plants*.





[1233]

HERACIUM Pileifolia.

Mossy or Hairweed.

FRUTICOSA Pileifolia-crem.

GEN. CHAR. *Leaves* nearly naked, dotted. *Cal.* imbricated, white. *Corolla* simple, scissile.

SP. CHAR. *Leaves* elliptical, entire, downy beneath. *Stems* creeping. *Stalk* simple, leafless.

SYN. *Heracium Pileifolia*. *Less. Sp. Pl.* 1125.
Sm. Fl. Brit. 323. Herb. 343. With. 682.
Engl. 175. Rost. 328. Schreb. 241. Abbot. 170.
Curt. Lond. pub. 2. 1. 52.

Pileifolia repens. *Rat. Sem.* 170.

FEW plants are more common than the *Heracium Pileifolia* in dry exposed places, such as gravelly banks, sunny lawns, and the tops of park walls, where it blossoms from May to the end of July, presenting us elegant sulphur-coloured flowers to the admiring eye, while the surrounding herbage, and even its own foliage, is withered and burnt up.

The roots are perennial, creeping by means of leafy scions





1875-1876. *Published by J. J. Savage, New York.*



THE MAIN FINDINGS

История России

206255 *See* 206254

~~ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED~~
~~DATE 08-11-2010 BY 60322 UCBAW~~

~~THE~~ ~~FLAT~~ ~~LEAFY~~ ~~CHINESE~~ ~~ASSOCIATE~~ nearly entire,
~~terminating~~ ~~with~~ ~~long~~ ~~hairs~~: rather glaucous be-
~~neath~~. ~~Stems~~ ~~erect~~ ~~Stalk~~ ~~bearing~~ ~~several~~
~~flowers~~.

Syn. *Hesperomys* *musculus*. *Linn. Sys. Nat.* 1125. *Sauv.*
F. Mus. Hist. Nat. Paris Sec. 9. 236. *Humb.*
1780. *Tour. Voy. Indes* p. 240.

E WITNESSE MY HAND AND SEAL

王 玉 琢 五 年 二 月





[2568]

HIERACIUM Auricula.

*Orange Mouse-ear Hawkweed.**SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves lanceolate, nearly entire, besprinkled with long hairs. Scions short. Stalk hairy, bearing several close-set flowers.

SYN. *Hieracium Auricula.* *Linn. Sp. Pl.* 1126. *Sm. Fl. Brit.* 829. *Tr. of Linn. Soc.* v. 9. 230. *Huds.* 344? *With.* 684? *Hull. ed.* 2. 231?

H. dubium. *Fl. Dan.* t. 1044.

TO render our illustration of the British Flora as complete as possible, we judge it indispensable to give a figure of this little-known species, though we can do it from dried exotic specimens only; but having gathered them fresh on Mount Cenis, we can vouch for the accuracy of the plate in every point. We doubt very much whether this *Hieracium* has a right to a place in the British list, but our figure, being kept in view, will serve, in due time, to settle that question. What Hudson gathered on Dalehead, Westmoreland, cannot be ascertained but by a scrupulous investigation of the spot, and a comparison between our present plate and *t.* 2332.

This species differs sufficiently from *dubium* in having lanceolate acute leaves, green on both sides; a very hairy stalk, bearing from 2 to 3, 4, or even 5, close-set, often umbellate flowers, rather smaller than those of *dubium*, and of a full yellow inclining to orange. The calyx is black. Long tawny hairs are scattered more or less abundantly over every part of the herbage. The root is perennial, creeping, but not extensively, with long strong fibres. The scions are few and short. In a garden they might prove more luxuriant, and the habit of the whole plant more lax.





HIERACTIUM aurantiacum.

Orange Hawkweed.

SYNGENESIA Polygamio-aequalis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Leaves elliptical, entire. Stem almost naked, simple, hairy, bearing a corymbus of many flowers.

SYN. *Hieracium aurantiacum.* *Linn. Sp. Pl.* 1126.
Don. Herb. fasc. 2. 41.

H. hortense latifolium, sive *Pilosella major.* *Ger. em.* 305.

MR. GEORGE DON has found this truly wild in several woods in Banffshire, as well as at Craigston in the neighbourhood of Turref, and it is quite a new acquisition to the British Flora. It is perennial, flowering in July, and has long been known in gardens, where it grows without trouble, still retaining, in various parts of England, the old name, recorded in Gerarde, of Grim the Collier, in allusion to the smutty effect of the black glandular hairs which invest the stalks and calyx.

The root creeps, and throws out many scions. Stem a foot high or more, erect, simple, round, very hairy, scarcely bearing one or two small leaves, and crowned with a corymbus of several handsome flowers, remarkable for their deep brownish orange colour. The calyx and flower-stalks are clothed, besides the above black hairs, with longer pale or tawny ones, like those on the leaves and stem. The leaves are nearly all radical, elliptical, broad, entire, hairy, especially the rib. Receptacle naked. Seed-down roughish.



Senecio Polypetalus fr. *Hel. Senecio* fr. *Senecio*



HIERACIUM murorum.
Wall Hawkweed.

SYNGENESIA Polygamia-aequalis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

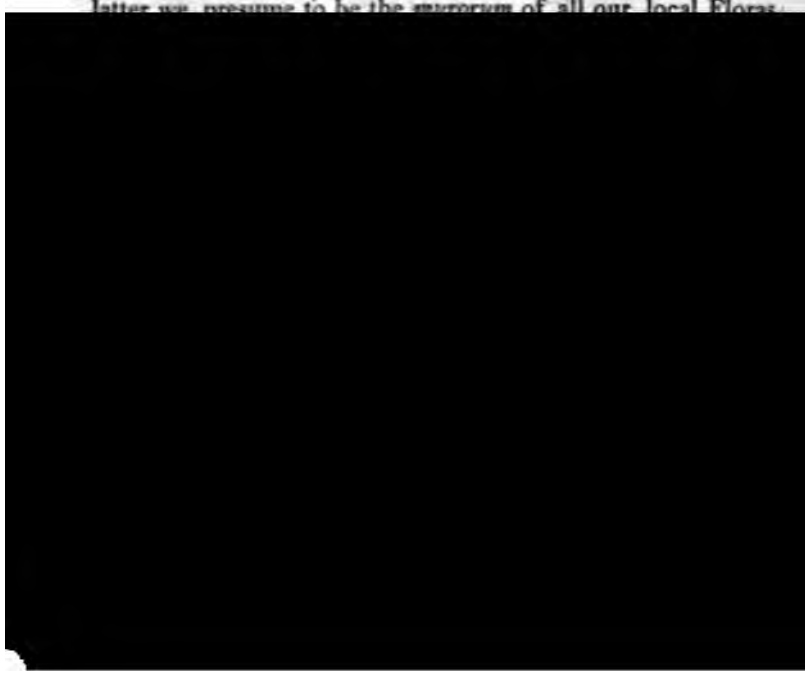
SPEC. CHAR. Stem branched, corymbose, one-leaved. Leaves ovate, inclining to heartshaped, wavy ; with radiating teeth chiefly at the base.

SYN. *Hieracium murorum.* *Linn. Sp. Pl.* 1128. *Sm. Tr. of L. Soc.* v. 9. 236. *With.* 686. *Hull.* 176. *Sm. Fl. Brit.* β. 830. *Huds.* γ. 345.

H. macrocaulon hirsutum, folio rotundiore. *Raii Syn.* 169.

Pulmonaria gallica, sive aurea, latifolia. *Ger. em.* 304.

THE wild specimen drawn in our plate was gathered in May last upon Chedder cliffs, Somersetshire, by Mr. E. Forster. The plant is perennial, and usually flowers again in the autumn, as mentioned under *H. sylvaticum*, t. 2031, which latter we presume to be the *murorum* of all our local Floras.





Nov. 1189 published by J. Kewerby London

V



[1012]

WISCONSIN

State of Wisconsin

ATTEST: Notary Public

That I, the undersigned, a Notary Public in and for the State of Wisconsin, do hereby certify that the within and foregoing is a true and correct copy of the original of the same, as the same appears from the records of the said Notary Public, and that the same is a true and correct copy of the original of the same, as the same appears from the records of the said Notary Public, and that the same is a true and correct copy of the original of the same, as the same appears from the records of the said Notary Public.

Witness my hand and the seal of the said Notary Public, at the City of Milwaukee, this 1st day of January, 1901.

HIERACIUM maculatum.

*Stained-leaved Hawkweed.*SYNGENESIA *Polygamia-æqualis.*GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, many-leaved, cymose. Leaves ovato-lanceolate, strongly toothed, the teeth pointing forward.

SYN. *Hieracium sylvaticum.* *Fl. Dan. t.* 1113. *Sm. Tr. of Linn. Soc. v.* 9. 240 β , erasing the syn. of Ray and Dillenius.*H. murorum* γ . *Sm. Fl. Brit.* 830.*H. pulmonarioides.* *Villars Dauph. v.* 3. 133. *t.* 34?

BROUGHT from Westmoreland to Norwich in 1781 by Mr. Crowe, from whose garden it has established itself in the neighbourhood, spreading extensively by seed, and preserving all its original habit and characters. By the authentic specimen shown me this spring, by Mr. Hailstone, from Dr. Richardson's herbarium, this proves to be what Dillenius mentions (at the bottom of p. 168 of his edition of Ray) as found by Dr. Richardson at *Llyn y cwm*, and which Dillenius supposed the *H. pulmonaria dictum angustifolium* of R. *Syn. ed.* 2. 74. See *Tr. of L. Soc. v.* 9. 238, where the latter is proved to be *Cineraria integrifolia*.

Our present plant is taller, and has a more leafy stem, than *H. murorum*, *t.* 2082, or even *sylvaticum*, *t.* 2031, differing from the former in having rather elliptical than heartshaped leaves, whose strong deep teeth all point forward and are by no means radiated. The leaves are moreover strongly speckled with black. From *sylvaticum* we now at length venture to distinguish it specifically by the size of those teeth, but especially by the cymose, not paniced, growth of its stem. The flowers also are larger, more numerous, with a darker thicker calyx, and the whole herbage is of a darker green. It is perennial, and flowers occasionally throughout the summer and autumn.—We are more and more inclined to think Villars's plant the same, its leaves being spotted likewise, to which his name alludes. But the barbarous hybrid construction of that name is best avoided. The stem in his is nearly solid, in ours decidedly hollow, and we are not competent to say how material that difference may be.



Revised and published by J. C. Smith, 1880.



HIERACIUM sylvaticum.

Wood Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, many-leaved. Leaves ovato-lanceolate, toothed chiefly about the base, the teeth pointing forward.

SYN. Hieracium sylvaticum. *Sm. in Tr. of Linn. Soc.* v. 9. 239. *Gouan. Obs.* 56, by the description. *With.* 687. *Galpine*, 67.

H. murorum. *Ehrh. Herb.* 147. *Allion. Ped. t.* 28. *f.* 1. *Sm. Fl. Brit. æ.* 830.

H. murorum, folio pilosissimo. *Raii Syn. ed.* 2. 74. *ed.* 3. 168.

THE history of this plant and *H. murorum*, somewhat confused, in consequence of old mistakes, in *Fl. Brit.* is explained in the Linnæan Society's Transactions, vol. 9, more fully than we can here repeat. It is only necessary to say that the synonyms of Ray, Gerarde and Petiver, *Fl. Brit.* 831, actually belong, not to this Hawkweed, but to *Cineraria integrifolia*, as is proved by a specimen from Dr. Lamb of Newberry.

The plant before us was gathered by Mr. E. Forster in Epping forest near Highbeach. It is however not uncommon in various parts of the kingdom, in dry chalky woods, or on old park walls, flowering usually in July, and again late in autumn, like the more rare *H. murorum*, of which we hope another season to obtain a drawing. The root is perennial, slender, slightly creeping, with long simple fibres. Herb hairy, of a pale grass green. Stem more or less branched, round, paniced, bearing several alternate long-stalked leaves, whose form is lanceolate inclining to ovate, acute, most toothed about their lower half, the teeth either direct or pointing forwards, not backwards. Flowers of a full lemon, not orange, yellow, rather small, their calyx rough, rather more cylindrical than ovate.

H. murorum γ *Fl. Brit.* 830, if not a distinct species, which we much suspect, is rather a variety of this.

v



[287]

LITERATURE

THEORY AND PRACTICE

BY

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

AND

THE EDITOR, *THE LITERARY GAZETTE*

HIERACIUM pulmonarium,

*Lungwort Hawkweed.**SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, cymose, with few leaves, solid. Leaves lanceolate, deeply toothed, the teeth pointing forward.

SYN. *Hieracium pulmonarioides.* *Villars. Dauph.* v. 3. 133.

OUR doubts respecting this plant of Villars are removed by the discovery of Scottish specimens, exactly according with his own from Dauphiny. These were gathered by Mr. W. Borrer, on the banks of the river Nivis, near the bridge, last summer. We have several unsettled specimens of this genus, especially from Mr. G. Don, both dried and living, still under our observation, but none that appears to agree with the present.

This species is satisfactorily distinguished from *H. maculatum*, t. 2121, by its solid stem, and the small number of its stem-leaves, which are mostly one or two, near the bottom only. The flowers are fewer and larger. Radical leaves numerous, stalked, lanceolate or slightly elliptical, narrower than those of *maculatum*, and rather clouded than spotted, with faint tints of purplish brown. Their teeth are deep and strong, all pointing forward; the margins and footstalks hairy. Root perennial. Stem not half so tall as that of *maculatum*. We have retained the sense of the original name, which alludes to the leaves being spotted like *Pulmonaria* or Lungwort, but have changed the termination *oides*, which is inadmissible except in words of Greek derivation.



As depicted by J. A. S. S. S. S.





HIERACIUM Lawsoni.

Glaucous Hairy Hawkweed.

SYNGENESIA *Polygonia-aqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem remotely branched, not striated. Leaves almost all radical, stalked, elliptic-lanceolate, decurrent, glaucous, fringed, nearly entire.

SYN. Hieracium Lawsoni. *Villars. Dauph. v. 3. 118. t. 29, bad.*

H. glaucum pilosum, foliis parùm dentatis. Dill. Eluk. 180. t. 149.

H. leptocaulon hirsutum, folio longiore D. Lawson. Raii Syn. ed. 2. 74. ed. 3. 169.

LIVING plants of this *Hieracium* were communicated to us from the Cambridge garden, by Mr. Donn, as undoubtedly of British growth. It is evidently the above plant of Dillenius, though he seems not to have hit on the proper synonym of Ray, but rather referred it, not without doubt, to one which belongs to the true *marorum*, *t. 2082*. Our plant agrees precisely with the specimen of the *H. Lawsoni* of Villars, mentioned in *Tr. of L. Soc. v. 9. 241*, to which place we refer the botanical writers for further information.



His 1859 published by J. E. Smith, London.



HIERACIUM paludosum.

*Succory-leaved Hawkweed.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem panicled, hollow. Leaves toothed, smooth, embracing the stem with their heart-shaped base. Calyx rough.

SYN. *Hieracium paludosum.* *Linn. Sp. Pl.* 1129. *Sm. Fl. Brit.* 831. *Huds.* 345. *With.* 686. *Hull.* 176. *Lightf.* 438.

H. montanum cichorei folio nostras. *Raii Syn.* 166.

WILD specimens of the plant here delineated were sent from North Wales by Mr. Turner, and from Yorkshire by Mr. Hailstone, in July and August last. It is generally esteemed a rare species, and indeed is only to be found in our most mountainous counties, where it delights in moist shady places. We have formerly seen it cultivated with success even in a smoky London garden for several years; and it is remarkable that some of the most alpine plants, as *Angelica Archangelica*, thrive best in such an atmosphere.

The root is perennial, formed of many downy fibres. Herb smooth, intensely bitter. Stem angular, leafy, hollow, panicled above but simple in the lower part, leafy. Leaves alternate, somewhat elliptical, toothed, sharp-pointed, clasping the stem with their heart-shaped base. Panicle corymbose, spreading, furnished with a few small ciliated bractææ. Calyx rough with black prominent hairs. Corolla bright full yellow. Receptacle naked. Seed pale-brown. Down rough.

1094



No 1 1802 Published by J. Sowerby London



[2210]

HIERACIUM molle.

Soft-leaved Hawkweed.


SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem panicled, hollow, angular. Leaves lanceolate, slightly toothed, hairy, clasping the stem; lower ones stalked, more elliptical and obtuse.

SYN. Hieracium molle. *Jacq. Austr. v. 2. 12. t. 119.*
Dicks. Tr. of Linn. Soc. v. 2. 288. H. Sicc.
fasc. 11. 13. Sm. Fl. Brit. 832. With. 638.
Hull. ed. 2. 232.

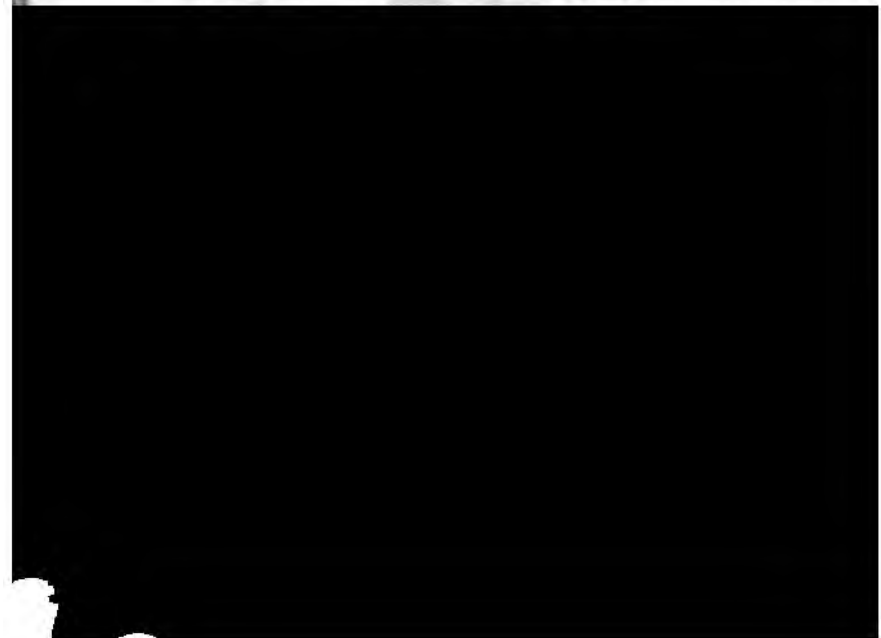
MR. DICKSON discovered this Hawkweed, which Linnæus never described, in woods in the south of Scotland, and we are obliged to him for an authentic specimen, which agrees with original ones of Jacquin in the Linnæan herbarium.





Illustrated by J. E. Smith, Esq.

✓





[2378]

HIERACIUM cerinthoides.

Honeywort-leaved Hawkweed.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem corymbose, solid. Leaves hairy, with a few small teeth; the upper oblong, half clasping the stem; the radical ones obovate, with fringed footstalks.

SYN. *Hieracium cerinthoides.* *Linn. Sp. Pl.* 1129. *Sm. Tr. of Linn. Soc.* v. 9. 242. *Gouan. Illustr.* 58. t. 22. f. 4. *Villars Dauph.* v. 3. 110. t. 32.

SENT from the Highlands of Scotland, by its discoverer Mr. George Don, who informs us this species is by no means uncommon there, upon rocks, though hitherto not admitted into any British Flora. It flowers in August and is perennial.

The stem is eighteen inches or two feet high, erect, round, more or less leafy, solid, bearing at the summit several moderately large yellow flowers, on hispid and downy stalks, in a corymbose form. Leaves all somewhat glaucous, opaque, with a very smooth appearance, except that their edges and ribs are fringed with fine long hairs. The radical ones are lanceolate inclining to obovate, on long fringed bordered stalks; the uppermost dilated and partly clasping the stem at their base, with taper points. Scales of the calyx taper-pointed. Seed-down copious, minutely rough. Mr. Don's specimen has scarcely more than one or two minute teeth at the edges of a few of the stem-leaves. Some in Mr. Davall's collection, like that of Linnæus, are more toothed. The leaves all vary in breadth.







HIERACIUM villosum.

Shaggy Alpine Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem leafy, slightly branched. Leaves wavy or toothed, rough with long hairs; the radical ones lanceolate; the rest ovate or oblong.

SYN. Hieracium villosum. *Linn. Sp. Pl.* 1130. *Sm. Fl. Brit.* 833. *With.* 687. *Hull. ed. 2.* 232. *Dicks. Tr. of Linn. Soc. v. 2.* 288. *Jacq. Austr. t.* 87.

H. quintum villosum. *Clus. Hist. v. 2.* 141. *Ger. em.* 301.

FEW plants, in our British list, are more involved in obscurity than *H. villosum*, whose synonyms were misapplied by Ray and Dillenius to our *alpinum*, *t.* 1110. Native specimens of *villosum* we have never seen, that in our plate, though originally brought from Ben Lawers, having flowered in a garden, under the care of the late Mr. J. Mackay. It is certainly much more luxuriant, and branched from the base, than any of our native Swiss specimens, but the latter show this species to be extremely variable. Characteristic marks of it are the copious long shaggy hairs, bulbous at their base; the lanceolate stalked radical leaves, either wavy or toothed, whose under side has a pale and glaucous hue; and the large lemon-coloured flowers, solitary at the top of each stem or branch, whose numerous narrow acute dark calyx-scales are somewhat glaucous, and excessively hairy. The stem-leaves in our Scottish specimens are oblong and narrow; those of the foreign ones ovate, at least in part, which raises more doubt in our minds than any other circumstance. So much still remains to be done in this genus, that we pretend not to perfect certainty.

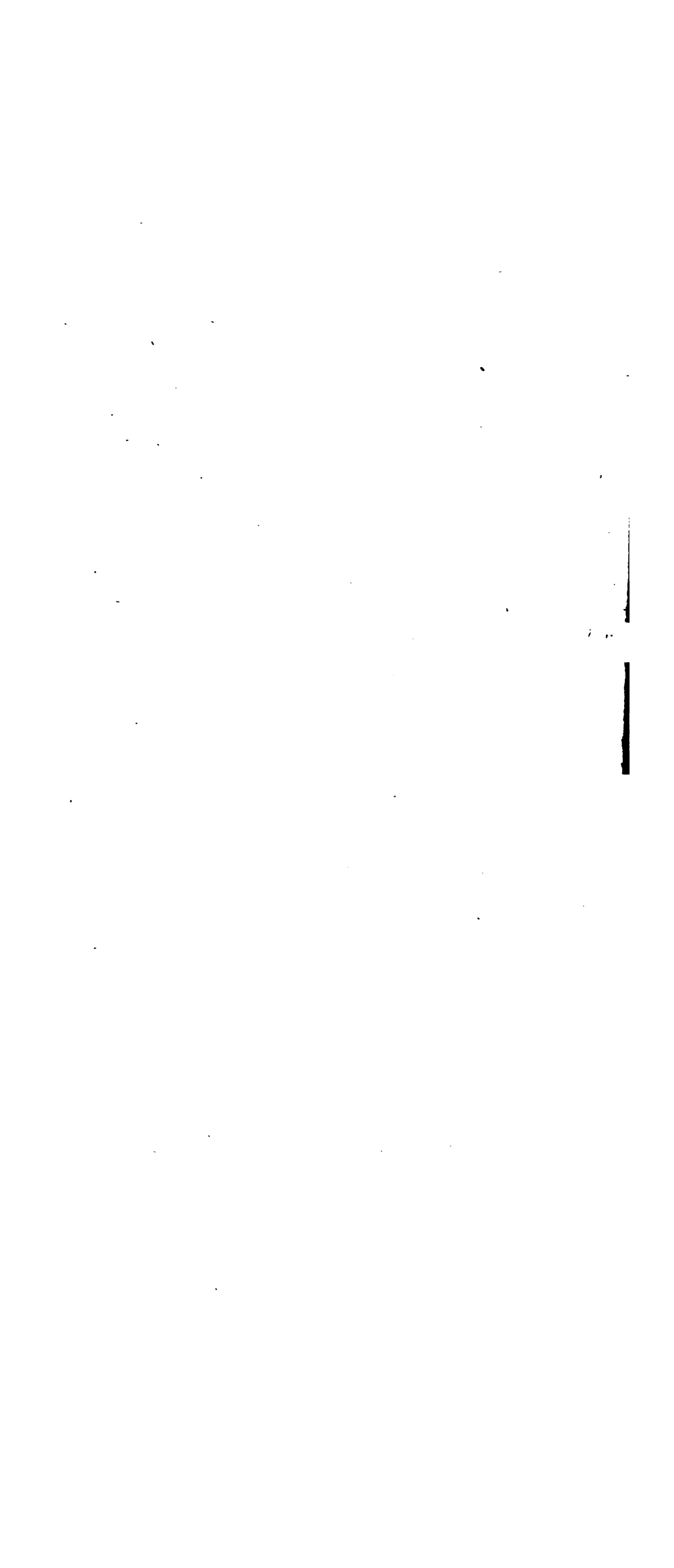
The plant before us has a woody perennial root, and flowers in August. The seed-down is rough, and rather short.

2379.



Folia a. exsiccata. by J. A. Schimper.





HIERACIUM sabaudum.

*Shrubby Hawkweed.**SYNGENESIA Polygamia-aequalis.*

GEN. CHAR. *Recept.* naked. *Cal.* imbricated, ovate.
Seed-down simple, sessile.

SPEC. CHAR. Stem erect, many-flowered. Leaves
 ovato-lanceolate, dentated, hairy beneath, half-em-
 bracing the stem; the lower ones elliptic-lanceolate.

SYN. *Hieracium sabaudum.* Linn. *Sp. Pl.* 1131. Huds.
Fl. An. 345. With. *Bot. Arr.* 849. Relh.
Cant. 298. Sibth. *Ox.* 241.

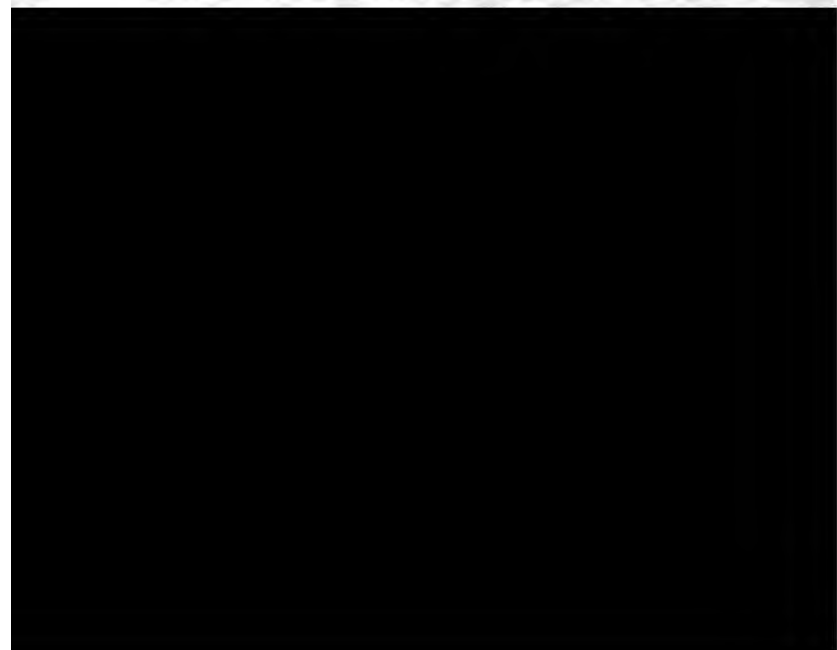
H. *fruticosum latifolium hirsutum.* Raii *Syn.* 167.

FREQUENT in coppices and groves, especially on a gravelly soil, flowering from July to September.

The root is perennial. Stem erect, 2 or 3 feet high, round, strong and woody, hairy in the lower part more especially, leafy, panicked more or less at the top. Leaves alternate, broad, acute, very distinctly dentated (of which kind of margin they afford a good example); dark-green and almost smooth above; paler, somewhat glaucous, and very hairy beneath: the lower ones are of a lanceolate-elliptical form, and elongated at their base; the greater part of those on the stem ovato-lanceolate, half-embracing the stem; the upper ones gradually smaller, and the floral ones entire. Flower-stalks erect, downy, forming a thin corymbus, which is liable to many different appearances, either from the injuries of animals, or different degrees of luxuriance. Flowers erect, open in the forenoon only. Calyx downy and hairy. Antheræ greenish. Stigma set with blackish hairs. Receptacle cellular, often a little hairy. Herb milky. In shady damp places the whole plant is sometimes smooth, but always rigid and firm in texture.



Helianthus scaberrimus (L.) R. & S.



2004-2005

HIERACIUM denticulatum.

Small-toothed Hawkweed.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem erect, many-flowered, solid. Leaves sessile, elliptic-lanceolate, finely toothed, smoothish, glaucous beneath. Flowerstalks glandular and cottony.

SYN. *Hieracium prenanthoides.* *Sm. Fl. Brit.* 835, excluding all the synonyms, except

H. Kalmii. *Sym. Syn.* 173. *Hull.* 176.

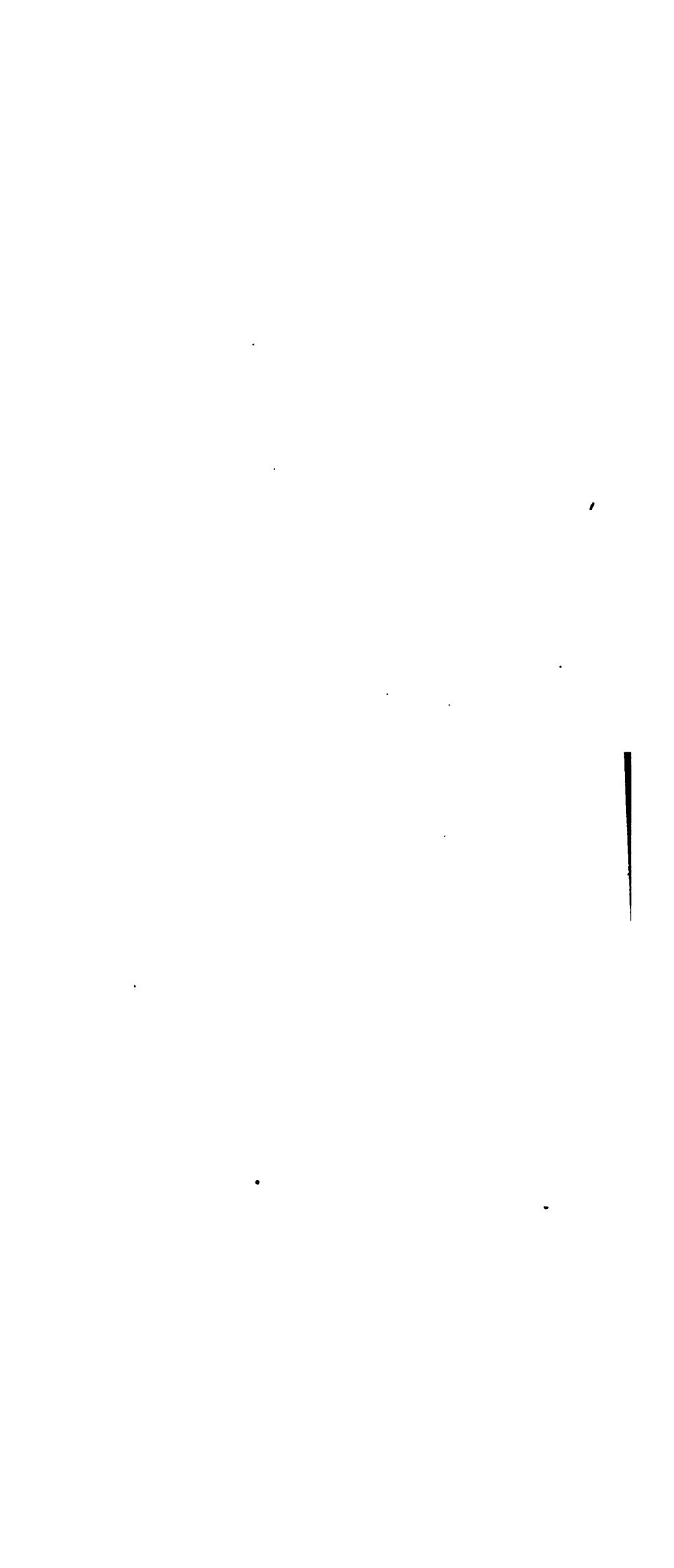
DAUPHINY specimens in Mr. Davall's herbarium show this not to be *H. prenanthoides* of Villars, whilst Scottish ones from Mr. G. Don prove it *H. Kalmii* of British writers, of which he claims the first discovery at Loch Rannach, Perthshire, in 1794. Mr. Dickson communicated it, many years ago, from Harehead wood, near Selkirk, to Mr. E. Förster, from whose garden our specimen was taken. It is widely different from *H. Kalmii* of Linnæus, and therefore we have given it a new name, expressive of one of the essential marks. It is perennial, and flowers in July.

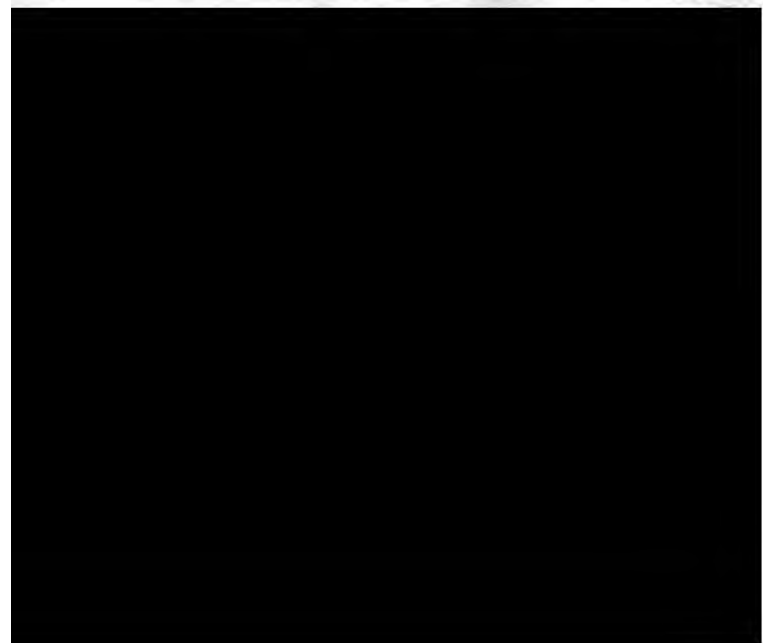
Stem a yard high, upright, round, striated, roughish, spongy and solid (scarcely fistulous) within, beset with several alternate leaves, and ending in a corymbose panicle of many full-yellow moderate-sized flowers, on very hispid, glandular, cottony stalks. Leaves sessile, not properly embracing the stem; the lower ones tapering at their base, and elliptic-lanceolate; the upper exactly ovate; all acute, thin, smoothish, finely and minutely toothed, the teeth obtuse and glandular; sometimes fringed, but not strongly; glaucous beneath. Calyx brownish, muricated, cottony and rather viscid. Bractæas small, entire, acute. Seeds angular, very smooth. Down rough.

Haller's n°. 43 proves the true *prenanthoides*, but Mr. Davall thought another species was confounded with it under that number. Whether either of these be really British, we must leave for future inquiry, the difficulties relating to this genus not being yet all removed.









v





For. 1810. published by J. L. L. L.



1771

MEMORANDUM

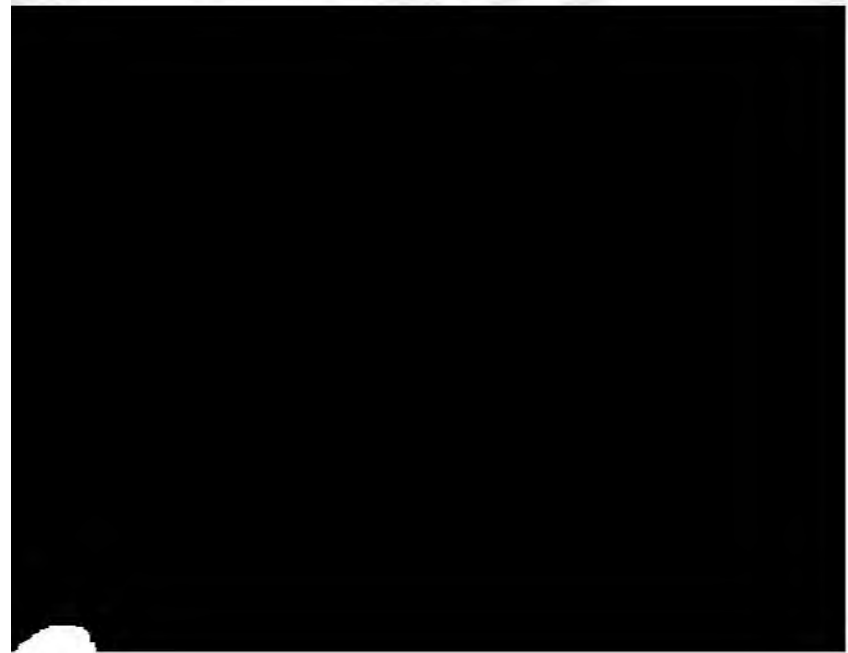
FOR THE RECORD

RECEIVED

On the 1st day of January 1771, the following
persons were present at the meeting of the
Board of Directors of the Bank of North
America, to wit: John D. Smith, President;
James M. Jones, Vice President; and the
other Directors, to wit: William H. Smith,
John A. Jones, and the other Directors.
The Board of Directors of the Bank of North
America, do hereby certify that the above
persons were present at the meeting of the
Board of Directors of the Bank of North
America, on the 1st day of January 1771.

Witness my hand and seal this 1st day of
January 1771.





CREPIS foetida.

Stinking Hawkweed or Crepis.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Receptacle* hispid. *Calyx* surrounded with deciduous scales. *Down* simple, generally on a footstalk.

SPEC. CHAR. Leaves runcinato-pinnatifid, hairy; their footstalks toothed. *Calyx* downy.

SYN. *Crepis foetida.* *Linn. Sp. Pl.* 1133. *Huds. Fl. An.* 339. *With. Bot. Arr.* 852. ed. 3. 689. *Relh. Cant.* 296.

Hieracium Castorei odore *Monspeliensium.* *Raii Syn.* 165.

GATHERED at Barton in Norfolk by the Rev. Mr. Hemsted. It always grows on a chalky soil, flowering in June or July, but is not of frequent occurrence.

Root biennial, small. Stems several, branched, spreading (the central one only being erect), round, hairy, leafy. Radical leaves spreading in the form of a star, deeply pinnatifid in a runcinate manner, and toothed, running down into a bordered toothed footstalk: those on the stem sessile; and the uppermost generally undivided. Flowers terminal, solitary, drooping when in the bud, then erect, rather small, yellow. *Calyx* clothed more or less with soft hairy down, not glandular. *Receptacle* (as Leers justly remarks) furnished with short hair, fringing the margins of its little cavities, as Gærtner also, *tab.* 158, has observed it in *C. alpina* and *biennis*, so that we have ventured to alter the generic character from *Receptacle naked* to *hispid*.—The seed-down is simple, scarcely perceptibly feathered under the highest magnifier, and stands on a footstalk.

Every part of the herb smells like bitter almonds, but much stronger, approaching to opium, or the juice of wild lettuce.



July 18th 1897. Collected by J. S. Sargent, London.



CREPIS pulchra.

Small-flowered Hawks-beard.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* roughish. *Cal.* surrounded with deciduous scales, and at length swelling into protuberances. *Down* simple, generally on a foot-stalk.

SPEC. CHAR. Leaves downy, toothed; those on the stem somewhat arrow-shaped. Stem paniced, corymbose. Calyx pyramidal, smooth.

SYN. *Crepis pulchra.* Linn. *Sp. Pl.* 1134. Sm. *Tr. of Linn. Soc.* v. 10. 344. Ait. *Hort. Kew.* v. 3. 128.

Hieracium pulchrum. Bauh. *Hist.* v. 2. 1025.

H. montanum alterum, leptomacrocaulon. Column. *Ecphr.* 248. t. 249.

Lapsana chondrilloides. Linn. *Sp. Pl. ed.* 1. 812.

WE very much doubt whether this plant has been seen by any English botanist of our times, though admitted into the first edition of the *Hortus Kewensis*, as having been cultivated by Rand in 1739 at Chelsea. Mr. G. Don found it wild in 1796, amongst crumbling rocks on the hill of Turin, near Forfar, and from seed communicated by him our specimen was raised. It is annual, flowering from June to September, and varying much in luxuriance according to the soil.

The root is small, taper, branching. Stem erect, downy, slender, round, hollow, paniced in a corymbose form at the top. Radical leaves obovate, thin, downy, toothed most in their lower part; the rest few, small, arrow-shaped, clasping the stem with their toothed base. Flowers small, yellow, closing about noon; their anthers and stigmas brownish. The scales at the base of the calyx are not deciduous. The down of the seed is nearly sessile, very slender, minutely toothed.



Sp. nov. published by J. S. Burroughs, London.



C R E P I S tectorum.

Smooth Hawk's-beard.

SYNGENESIA *Polygamia-aqualis.*

GEN. CHAR. *Recept.* roughish. *Cal.* surrounded with deciduous scales, and at length swelling into protuberances. *Down* simple, generally on a foot-stalk.

SPEC. CHAR. Radical leaves runcinate: the rest embracing the stem, lanceolate and toothed. Stem smooth.

SYN. *Crepis tectorum.* *Linn. Sp. Pl.* 1135. *Sm. Fl. Brit.* 837. *Willd.* 689. *Hull.* 174. *Relb.* 310. *Sist.* 240. *Arb.* 172. *Curt. Lond. fasc.* 5. 1. 55.

Hedypnois tectorum. *Hudf.* 341.

Hieracium luteum glabrum, five minus hirsutum. *Raii Syn.* 165.

NOTHING can be more common than this *Crepis* in dry waste places, on walls, rubbish, and banks, flowering from June to the end of September.

Root small, creeping. Herb very various in size, strength and aspect. Stems single, branched, furrowed, smooth, and sometimes hairy, generally stained with purple just above the joints. Leaves smooth, bright green; the lower ones lanceolate: the rest clasping the stem with an entire or slightly toothed margin. Heads deeply toothed above and smooth below, bright of color, somewhat roughish. Flowers bright yellow. Fruits black. Calyx roughish, and deciduous. Down simple, stiff. Receptacle somewhat protuberant.

This species is very variable, the smooth-leaved, small-leaved, and hairy-leaved forms being easily known. It is very common in the most fertile natural grounds of *Crepis*, and its characters of that genus may be determined.



See 1. 1871. Published by J. L. L. London





CREPIS biennis.

Rough Succory Hawkweed.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* naked. *Calyx* furrounded with deciduous scales. *Down* simple, generally on a footstalk.

SPEC. CHAR. Leaves runcinato-pinnatifid, rough, furnished at the base with teeth pointing upwards. *Calyx* bristly.

SYN. *Crepis biennis.* *Linn. Sp. Pl.* 1136. *Relb. Cant.* 296. *With. Bot. Arr.* 855.

Hedypnois biennis. *Hudf. Fl. An.* 342.

Hieracium maximum Chondrillæ folio asperum. *Raii Syn.* 166.

FOUND in a chalky soil, and communicated from near Bury by William Mathew, Esq. The root is biennial, spindle-shaped, flowering about June or July of the second year. Stem erect, three or four feet high or more, angular, rough, leafy, branched in the upper part, often purplish below. Radical leaves several, on long purplish footstalks, obovate, lyrato-dentate; those on the lower part of the stem runcinate, with many small sharp scattered teeth; the uppermost leaves more deeply pinnatifid, sessile, dilated and half embracing the stem at their base, with several sharp ascending teeth. All the leaves are rough, especially their mid-ribs beneath, with projecting bristles. Many alternate flower-stalks terminate the stem, the lowermost branched, making a sort of corymbus, each with a linear leaf at its base. The external calyx is lax, somewhat membranous in the margin, slightly bristly on the back, and half as long as the inner one, which is erect, more bristly on the back, and woolly at the base. The corolla is externally reddish. Florets 5-toothed, closing in the afternoon. Styles brownish. Seeds striated, and so much lengthened out into a beak that the down may almost be called stipitate. This down appears rough when highly magnified.—Sometimes, as Dr. Stokes well remarks, the calyx is smooth or nearly so, which is partly the case in Linnæus's own Scanian specimens.



166

J. A. Smith del. H. B. K. sculp.

1977

NOV 15 1977

LIBRARY

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 58TH STREET
CHICAGO, ILL. 60637
TEL: 773-936-5000
FAX: 773-936-5000
WWW.CHICAGO.EDU

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 58TH STREET
CHICAGO, ILL. 60637
TEL: 773-936-5000
FAX: 773-936-5000
WWW.CHICAGO.EDU

HYOSERIS minima.

*Swine's Succory.**SYNGENESIA Polygamia Æqualis.*

GEN. CHAR. *Receptacle* naked. *Calyx* nearly equal.
Down simple, or imperceptible.

SPEC. CHAR. Stem divided, destitute of leaves.
 Flower-stalks swelled upwards.

SYN. *Hyoseris minima*. Linn. *Sp. Pl.* 1138. *Huds.*
Fl. An. 346. *Witb. Bot. Arr.* 857. *Relb. Cant.* 300.

Hieracium minimum Clusii, *Hyoseris Tabernæmontani* & Gerardi. *Raii Syn.* 173.

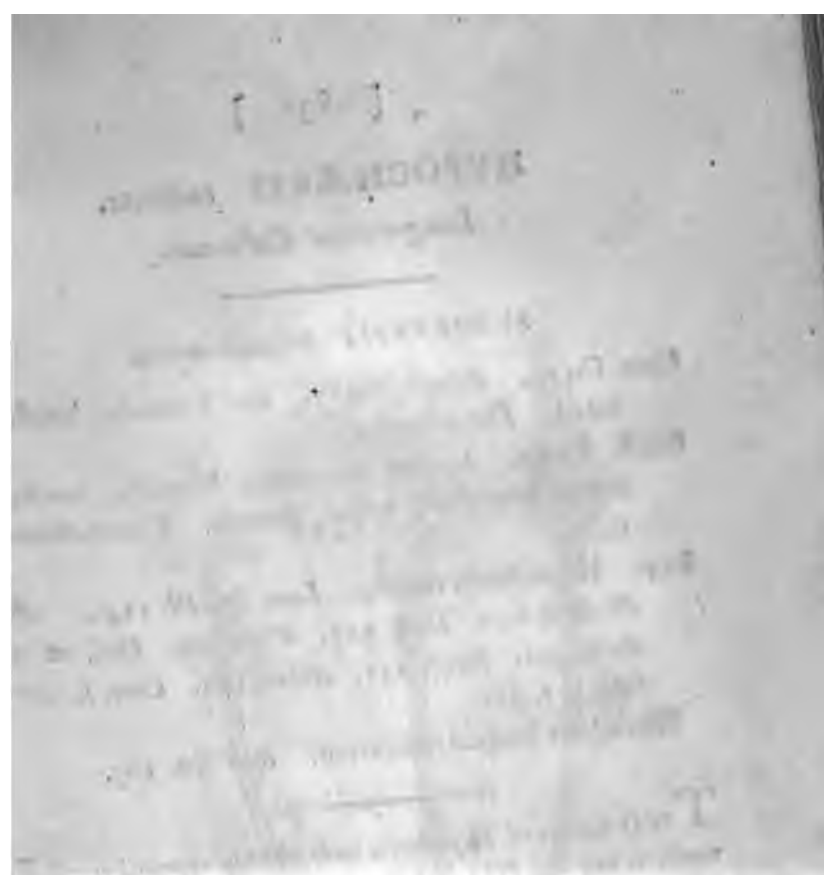
IN barren sandy gravelly fields, but not common. Sent June 30th last from near Apsley and Ampthill, Bedfordshire, by the Rev. Mr. Abbott; also from Walthamstow, by Mr. E. Forster, junior. It was long ago found by the side of Arminghall wood near Norwich.

Root annual, but little branched. Leaves spreading on the ground, entire or irregularly toothed, rough, especially on their edges. Stems three, four, or more, round, smooth, taper and purplish at the bottom, swelling gradually upwards, alternately branched, striated, immediately under the flowers hollow and inflated, with here and there a few small scattered, pointed, erect bractæ. The flowers are solitary at the end of each subdivision of the stem, small, erect, bright yellow. Corollæ very obtuse and toothed. Seeds crowned with an elevated rim, more rarely with short simple down.

Like all field plants it varies extremely as to luxuriance, in its most abject state producing one simple solitary stalk with a single flower, while in a more favourable soil it sometimes bears six or more branched stems, many flowers, and leaves proportionably numerous and large. *Hypochaeris glabra* is remarkable for the same phenomenon.







HYPOCHÆERIS *radicata.*

Long-rooted Cat's-ear.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Cal.* somewhat imbricated. *Down* feathery.

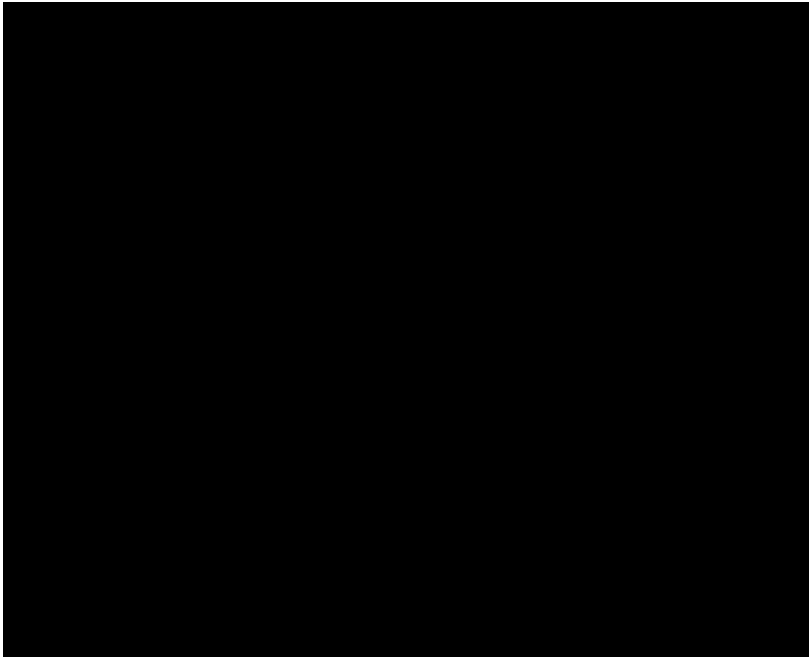
SPEC. CHAR. Leaves runcinate, bluntish, rough. Stems branched, naked, smooth. Flower-stalks scaly.

SYN. *Hypochaeris radicata.* *Lin. Sp. Pl.* 1140. *Sm. Fl. Brit.* 842. *Hudf.* 347. *With.* 692. *Hull.* 172. *Reib.* 301. *Sibb.* 242. *Abbot.* 172. *Curt. Lond. fuk.* 3. t. 52.

Hieracium longius radicatum. *Ran. Syn.* 165.

TWO species of *Hypochaeris* have already appeared in this work, t. 225 and 575; and that now before us, which is by far the most common, abounding in every pasture, completes the history of the genus as far as regards the British Flora.

This flowers from June to August, and is furnished with a





HYPOCHÆRIS maculata.

Spotted Hawkweed, or Cat's-ear.

SYNGENESIA Polygamia-æqualis.


GEN. CHAR. *Recept.* chaffy. *Cal.* somewhat imbricated. *Seed-down* feathery.

SPEC. CHAR. Stem naked, solitary. Leaves ovato-oblong, undivided, dentated.

SYN. Hypochæris maculata. *Lin. Sp. Pl.* 1140. *Hudf. Fl. An.* 346. *With. Bot. Arr.* 858. *Relb. Cant.* 300.

Hieracium primum latifolium. *Raii Syn.* 167. *Ger. em.* 301.

ONE of our rare chalk-country plants, discovered hitherto only about Newmarket heath, Burnack heath Northamptonshire, and in the sequestered country about Malham Cove in Yorkshire. Mr. Hemsted gathered our present specimen





Helianthus scaberrimus L. f. *Helianthus* L. f.





HYPOCHÆRIS glabra.

*Smooth Cat's-ear.*SYNGENESIA *Polygamia-æqualis.*GEN. CHAR. *Recept.* chaffy. *Cal.* somewhat imbricated. *Down* feathery.

SPEC. CHAR. Nearly smooth. Calyx oblong, imbricated. Stem branched, a little leafy. Leaves dentate or sinuated.

SYN. Hypochæris glabra. *Lin. Sp. Pl.* 1140. *Hudl.* 347. *Willd.* 692. *Abbot.* 173. *Curt. Lond. fasc.* 3. t. 53.*Hieracium parvum in arenosis nascens. Raii Syn.* 166.

A NATIVE of dry gravelly or sandy heaths, communicated from Bedfordshire by the Rev. Mr. Abbot. It was first observed in Norfolk by the Rev. Mr. Bryant, upon Cawston heath, and has since that time been pointed out to us by Mr. Crowe in turnep fields about Norwich, but in so luxuriant a state as scarcely to be known for the same species. Mr. Curtis's figure more approaches to this state. Ours expresses its growth when out of the reach of all manure. It flowers from June to the end of August.





LAPSANA communis.

Nipple-wort.

SYNGENESIA *Polygamia-equalis.*

GEN. CHAR. *Receptacle* naked. *Cal.* scaly at the base; its inner leaves equal, channelled. *Seeds* without wing or down.

SPEC. CHAR. *Calyx* when in fruit angular. Stem panicled. Flower-stalks thread-shaped.

SYN. *Lapsana communis.* *Lin. Sp. Pl.* 1141. *Sm. Fl. Brit.* 842. *Herb.* 347. *Walt.* 693. *Hull.* 178. *Reich.* 301. *Silb.* 242. *Abbt.* 173. *Curt. Lond. fasc.* 1. t. 59. *Dickf. H. Sicc. fasc.* 11, 12.

Lampiana. Rost Syn. 173.

FREQUENT in waste as well as cultivated ground, and sometimes a troublesome weed, as the seeds lie long in the earth, springing up from time to time occasionally, like those of poppies. It flowers in June or July.

844.



Helianthus scaberrimus L.



[17]

STENOGRAPHIC SYSTEM

W. W. WATSON

STENOGRAPHIC SYSTEM

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

THE STENOGRAPHIC SYSTEM is a new and original system of shorthand, and is the only one that is both simple and complete. It is the only one that is both simple and complete. It is the only one that is both simple and complete.

CICHORIUM Intybus.

*Wild Succory.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Receptacle* slightly chaffy. *Cal.* surrounded with scales. *Seed* crowned with teeth.

SPEC. CHAR. Flowers sessile, in pairs. Leaves runcinate.

SYN. *Cichorium Intybus.* *Linn. Sp. Pl.* 1142. *Huds.* 348. *With.* 693. *Relb.* 302. *Sibth.* 243. *Curt. Lond. fasc.* 4. *t.* 56. *Mart. Fl. Russt. t.* 144.

C. sylvestre. *Raii Syn.* 172.

VERY common in the borders of fields, by road sides, and in all ill cultivated or waste land, preferring however something of a calcareous soil, and flowering in July or August.

Root perennial, fleshy, tap-shaped, often branched, running deep into the ground, milky. Stem 2 or 3 feet high, erect, hard and tough, wand-like, alternately branched, angular above, bristly, producing many flowers, for the most part in pairs, and accompanied by small stem-clasping leaves. The radical leaves are numerous, spreading, long, runcinate, roughish. Flowers sessile, large and handsome, of a brilliant sky blue, rarely white, composed of numerous, ligulate, 5-toothed florets. Common calyx of erect, parallel, linear leaves, with a rough keel, reflexed as the seeds ripen, surrounded at the base with a series of shorter leaves or scales. Receptacle punctate, and scattered with a few chaffy hairs. Seeds angular, crowned with several short chaffy teeth.

When Mr. Curtis described the Wild Succory he considered it as a beautiful but noxious weed, and so it was generally considered. Dr. Withering mentions it as eatable in sallads, and that the dried roots will make bread; adding, after the *Ameritates Academicæ*, that sheep, goats, and swine eat it, but cows and horses refuse it. This last is a mistake. The best account of the agricultural uses of the Succory are in Professor Martyn's too much neglected *Flora Rustica*, where its culture and uses are detailed. I have been an eye-witness to the experiments made in France upon this plant, its luxuriant growth when cultivated, and its value as an early fodder for horses and cows.





47.
[1228]

ARCTIUM Lappa.

Burdock, or Clot-Bur.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* globose; each of its scales terminating with an incurved hook.

SPEC. CHAR. Leaves heart-shaped, without prickles, on footstalks.

SYN. *Arctium* Lappa. *Linn. Sp. Pl.* 1143. *Sm. Fl. Brit.* 844. *Huds.* 348. *With.* 694. *Hull.* 178. *Relh.* 314. *Sibth.* 243. *Abbot.* 174. *Curt. Lond. fasc.* 4. t. 55. *Woodv. Med. Bot.* t. 15.

Lappa n. 1—6. *Dill. in Raii Syn.* 196, 197.

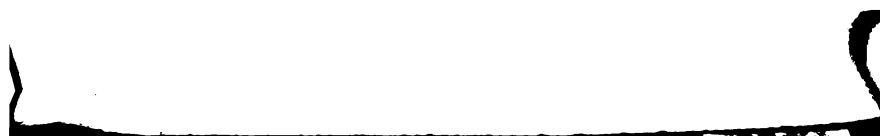
A PLANT almost every where to be found in waste or neglected ground, varying much according to the luxuriance of the soil, (see Ray's *Synopsis*), and thriving particularly on dunghills. It flowers in July and August, and is biennial.

Root tapering. Stem erect, much branched and widely spreading, somewhat pyramidal, 3 feet or more in height, furrowed, downy, often purple. Leaves alternate, heart-shaped, acute, waved, ribbed, three-nerved at the base, white and downy beneath. They stand on concave footstalks, and are, when full sized, almost the largest leaves of any British plant. Flowers nearly sessile, clustered about the upper part of the stem and branches. Calyx globular, formed of numerous narrow scales, each tipped with a little incurved hook, by means of which the whole calyx, when laden with ripe seed, easily separating from its stalk, adheres to the hairy or woolly coats of animals, who can scarcely free themselves from this encumbrance without rubbing the calyx to pieces, and so scattering the seed about their habitations, where it is most likely to meet with a manured soil. The florets are purple, all tubular and regular. Receptacle bristly, as is also the crown of the seed.

The flowers vary in size, as well as in having more or less cottony down about their calyx.



Col. J. Hook. Delivered by J. L. Smith, London.



[2478]

ARCTIUM Bardana.

*Woolly-headed Burdock.*SYNGENESIA *Polygonia-apoclin.*

GEN. CHAR. Cal. globose, each of its scales terminating in an incurved hook.

SPEC. CHAR. Leaves heartshaped, without prickles, nearly entire, on footstalks. Calyx interwoven with cottony down.

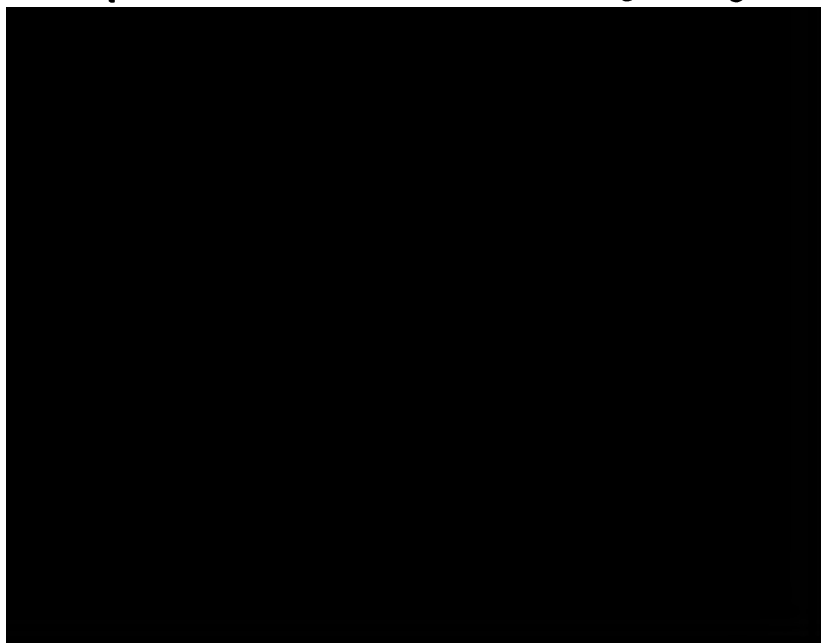
SYN. *Arctium Bardana*. *Willd. Sp. Pl. v. 3. 1632.*

Detr. Carr. ed. 5. 163.

A. Lappa L. *Lin. Sp. Pl. 1143. Fl. Dan. t. 642.*

Lappa major montana, capitulis tomentosa. Rostk
Syn. 197.

PROFESSOR WILLDENOW, whose recent death we have to lament, has asserted in his *Sp. Pl.* that the Woolly-headed Burdock has often been raised by him from seed, and continued constant to its characters. We therefore think it entitled to a place in our work. The fine cobweb down entangled amongst its





Illustrated by J. C. Smith

SERRATULA tinctoria.

Common Saw-wort.

SYNGENESIA Polygonia equalis.

GEN. CHAR. *Calyx* nearly cylindrical, imbricated; scales not pungent.


SPEC. CHAR. Leaves ciliated, lyrato-pinnatifid; the terminal segment largest. Florets all alike.

SYN. *Serratula tinctoria*. *Linn. Sp. Pl.* 1144. *Huds. Fl. Fr.* 349. *Wub. Bot. Arr.* 865. *Rehb. Cant.*

303.

Serratula. *Russ. Syn.* 196.

THE root is perennial, and somewhat woody. Stem two or three feet high, angular. Lower leaves generally, and sometimes all the leaves, undivided. The whole plant is firm, rigid, and harsh to the touch, but not prickly. The flowers are said to be sometimes white; but this is an uncommon circumstance. This plant is not one of the most frequent: its





Salvia officinalis L.





SERRATULA alpina.

*Alpine Saw-Wort.*SYNGENESIA *Polygonia-aquatis.*

GEN. CHAR. *Cal.* nearly cylindrical, imbricated ; scales not pungent.

SPEC. CHAR. Calyx clothed with soft hairs, ovate. Leaves undivided, cottony beneath.

SYN. *Serratula alpina.* *Lin. Sp. Pl.* 1145. *Huds.* 349. *Wisk.* 696. *Hall.* 180. *Lichtf.* 448. *t.* 19.

Cirsium humile montanum, *Cynoglossi folio*, polyanthemum. *Ram. Syn.* 193.

β. *C. montanum polyanthemum*, *Salicis folio angusto denticulato.* *Ram. Syn.* 193.

COMMUNICATED by J. W. Griffith, Esq. from the highest rocks of Caernarvonshire, where it flowers in July and August. It appears from Mr. Lightfoot's account not to be very rare in Scotland, though one of the most truly alpine of all our British productions.

399.



Thalictrum flavum L.





CARDUUS nutans.

*Musk Thistle.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves interruptedly decurrent, spinous. Flowers drooping. Calyx-scales lanceolate, their upper part spreading.

SYN. *Carduus nutans.* *Linn. Sp. Pl.* 1150. *Sm. Fl. Brit.* 848. *Hudsf.* 350. *With.* 699. *Hull.* 179. *Relb.* 315. *Sibth.* 244. *Abbot.* 175. *Raii Syn.* 193.

THIS, the only British *Carduus* which remains to be published in the present work, is not uncommon in waste ground, fallow fields and barren pastures where the soil is gravelly, or, more especially, calcareous. It is an annual plant, flowering in July and August. The flowers are not unornamental, and smell strongly of musk in warm weather. Their drooping posture distinguishes them from our other thistles.

The stem rises, from a spindle-shaped root, to the height of 2 or 3 feet, sometimes not so much, and is striated, slightly invested with cottony down, and clothed with alternate leaves, which form an interrupted spinous wing on each side the stem. The leaves also are very spinous, deeply sinuated and waved, green on both sides, a little hairy but not rough. Flowers on a woolly, round, naked, curved stalk, solitary, terminal, of a rich crimson. Calyx ovate, its scales ending in broad spreading leafy points, slightly clothed with cotton. Seeds obovate, shining, marked with dotted streaks. Down deciduous, simple, rough, but not feathery.



Scot. 1808. Published by J. G. Smith, London.

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

1915

WINDY & CLOUDY

CARDUUS acanthoides.
Wetted Thistle.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves decurrent, sinuated, spinous. Calyx globose, not quite sessile; its scales linear, recurved.

SYN. *Carduus acanthoides.* *Linn. Sp. Pl.* 1150.
Sm. Fl. Brit. 848. *With.* 698. *Hull.* 179.
Sym. 176. *Relb.* 304.

C. crispus. *Hudf.* 350. *Lightf.* 452.

C. polyacanthos. *Curt. Lond. fasc.* 6. t. 54. *Sibth.* 245. *Abbot.* 175.

C. caule crispo. *Raii Syn.* 194.

THIS species of Thistle, though not common, is rather more frequently to be met with, about hedges and dry waste places, than the *tenuiflorus*, v. 6. t. 412, with which some of its synonyms have been confounded. Hudson and Lightfoot took it for the *crispus* of Linnæus, which is not a British plant.

C. acanthoides flowers in June and July. Its root is annual, spindle-shaped. Whole plant more green and less hoary than *tenuiflorus*. Stem 3 feet or more in height, branched, furrowed, clothed on every side with scalloped wings formed by the decurrent leaves. These wings, as well as the leaves themselves, which are deeply sinuated, have all their edges fringed with innumerable divaricating spines of various lengths. The flowering branches are elongated and a little spreading, terminating in irregular clusters of purple erect flowers, generally on short partial stalks. The calyx is globose, very different from that of *tenuiflorus*; its scales linear, a little recurved at the tip, especially when old, terminating in slender spines, and but slightly woolly. Wing of the seed deciduous, bristly, rough.



Th. Virgin. Bithab. by J. C. Smith



CARLTON

STATIONER, PRINTER, & BINDER

100 N. 3rd St. St. Paul, Minn.
 Telephone 100
 Business hours 9 a.m. to 5 p.m.
 Sunday 10 a.m. to 1 p.m.
 Delivery of papers and mail
 by express and freight
 collect. Also delivery of
 newspapers and magazines
 by express and freight
 collect. Also delivery of
 newspapers and magazines
 by express and freight
 collect.

Also delivery of newspapers
 and magazines by express
 and freight collect. Also
 delivery of newspapers and
 magazines by express and
 freight collect. Also delivery
 of newspapers and magazines
 by express and freight collect.

CARDUUS tenuiflorus.
Slender-flowered or Welled Thistle.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. Cal. ovate, imbricated with spinous scales.
Receptacle hairy.

SPEC. CHAR. Leaves decurrent, pinnatifid, spinous.
Branches straight, winged. Flowers in terminal
clusters, sessile, nearly cylindrical. Scales nearly
erect, tipped with long spines.

SYN. Carduus tenuiflorus. Curt. Lond. fasc. 6. t. 55.
Sibth. Ox. 244. With. Bot. Arr. ed. 3. 698.

C. acanthoides. Huds. Fl. An. 351. Lightf. Scot.
451. With. Bot. Arr. ed. 2. 871.

C. spinosissimus capitulis minoribus. Raii Syn. 194.

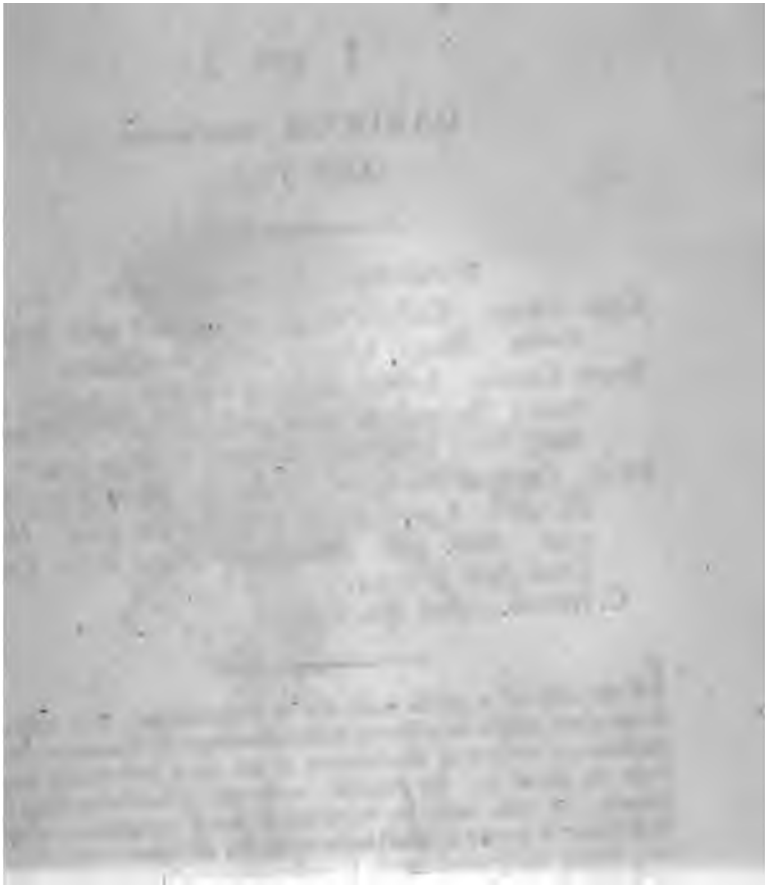
AFTER much controversy among our British botanists concerning this thistle, the herbarium of Linnæus has decided it to be none of those mentioned in his works, though his *pycnocephalus* and *australis* come so very near it, that for some time we have been inclined to consider all three as varieties of each other. The two last however have fewer scales in their calyx, the stalk less winged, and their flowers (whether sessile or pedunculated) are much fewer together, with less numerous florets also than in the *tenuiflorus*. It is necessary here to remark that the synonyms of *pycnocephalus* in *Sp. Pl.* are both false, Jacquin's *Hort. t. 44.* being the plant Linnæus intended and described; the remark in *Syst. Veg.* "*flosculis sæpius 3 s. 4.*" is an absurd blunder of the editor, for the original ms. has "*fere 10.*" which is true.

We adopt Mr. Curtis's name, which is more apt than any by which this plant has hitherto been called. We cannot pay the same compliment to his *C. polyacanthos*, which is the real *acanthoides* of Linnæus.

The slender-flowered thistle, though not a general plant, is frequent on banks and among rubbish near London, as about Marybone, &c. The root is annual. Stem erect, 3 feet high, branched, winged with broad, sinuated, strongly spinous portions of the decurrent leaves, which are in like manner sinuated and spinous, the radical ones being on short footstalks, somewhat lyrate, and all a little cottony. Flowers terminal, clustered, sessile, erect, pale rose-coloured. Calyx nearly cylindrical; scales with a membranous margin, and strong yellow terminal spine, not woolly, pale in their lower part, green at the tip. Florets from 10 to 15 or more. The calyx is permanent, according to Dr. Goodenough's observation, and not deciduous when the seeds ripen, as in *C. pycnocephalus*.



Carduus marianus L.



CARDUUS marianus.

*Milk Thistle.*SYNGENESIA *Polygamia aequalis.*GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves clasping the stem, waved, spinous; the radical ones pinnatifid. Calyx-scales leafy, bent backward, spinous at the edge.

SYN. *Carduus marianus.* *Linn. Sp. Pl.* 1153. *Sm. Fl. Brit.* 851. *Huds.* 353. *Wsb.* 700. *Hull.* 179. *Retz.* 306. *Sibth.* 246. *Abbt.* 176. *Curt. Lond. f. c. 3. t. 54.**C. Mariæ.* *Rau Syn.* 195.

IF the idea of a *thistle* were not an impediment, this magnificent plant might be allowed with advantage to ornament such gardens or borders of shrubberies as are on a sufficiently large scale to admit it. In general, however, notwithstanding its beauty, it can only be considered as a cumbrous weed. Wherever it grows it effectually excludes all other vegetables; but, being easily eradicated, is only permitted to establish itself on banks by road-sides, and similar spots, where the flowers are seen about June or July.

The root is tap-shaped and annual. Stem erect, widely branching, smooth, 4 or 5 feet high. Radical leaves many,





1941

GRAND GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

THE GUARD

CARDUUS lanceolatus.

Spear Thistle.

SYNGENESIA *Polygamia Æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with spinous scales.
Receptacle hairy.

SPEC. CHAR. Leaves decurrent, pinnatifid, hispid; their segments divaricated. Calyx villose. Stem hairy.

SYN. *Carduus lanceolatus.* Linn. *Sp. Pl.* 1149. *Hudf.*

Fl. An. 350. *Witb. Bot. Arr.* 868. *Relb. Cant.* 304.

C. lanceatus. *Raii Syn.* 195.

AMONG the various tribes of thistles, many of them very intricate to a botanist, this is one of the most easily distinguished, as well as the most common. All our road-sides, banks and heaps of rubbish are occupied by it, of which it seems proudly to take possession, to the exclusion of all vegetables besides. Yet, as Dr. Withering observes, it is often a shelter and protection to other plants, and is one of the first to grow in places where many would not thrive. In other respects its use in the economy of nature is not very discernible, except that the seeds are eaten by small birds, particularly the Gold-finch.

Root biennial. Stem erect, three or four feet high, firm, branched, striated, slightly hairy, and covered like the back of the leaves and calyx with a cotton-like web. The leaves, white beneath, are green and very hispid on the upper side, decurrent at the base, and all their indentations are armed with strong divaricating spines. It begins flowering in June, and lasts till winter.





Cirsium discolor L.

•



CARDUUS palustris.

Marsh Thistle.

SYNGENESIA *Polygonia-equalis.*

GEN. CHAR. Cal. swelling, imbricated with spinous scales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves decurrent, pinnatifid, toothed, spinous, rough. Calyx ovate, clustered; its spines minute. *Down* scabery.

SYN. *Carduus palustris*. *Lin. Sp. Pl.* 1151. *Sm. Fl. Brit.* 830. *Hedl.* 352. *Willd.* 697. *Hull.* 179. *Roll.* 303. *Scrib.* 245. *Abbt.* 176. *Curt. Lond.* 177. 6. 1. 55. *Rat. Sm.* 194.

ONE of the most frequent Thistles in marshy places, boggy woods, and so wet commons, flowering in July and August.

Root annual, branched. *Stem* erect, very straight, from 3 to 6 feet in height, angular, winged as in the preceding, but the wings are more deeply finuated or interrupted; the branches, likewise winged, are long, spreading, wand-like, often purple. *Leaves* dark-green, rough, deeply pinnatifid, toothed, very spinous. *Flowers* terminal, clustered, deep purple, though a solitary plant with white flowers often occurs among a number of the usual colour. *Calyx* ovate or nearly





CARDUUS arvensis.

*Creeping Thistle.*SYNGENESIA *Polygamia-aqualis.*GEN. CHAR. *Cal.* swelling, imbricated with spinous
scales. *Recept.* hairy. *Down* deciduous.SPEC. CHAR. Leaves sessile, pinnatifid, spinous.
Stem panicled. Calyx ovate; its spines minute.
Down feathery.SYN. *Carduus arvensis.* *Sm. Fl. Brit.* 851. *Curt.*
Leid. Jacq. 6. t. 57. *Sibth.* 245.*C. vulgatissimus viarum.* *Raii Syn.* 194.*Serratula arvensis.* *Lin. Sp. Pl.* 1149. *Huds.* 349.
Willd. 696. *Hall.* 180. *Rehb.* 303. *Abbot.* 174.
Mart. Ross. 1. 132.

WE most heartily assent to Mr. Curtis's removal of this plant from *Serratula* to *Carduus*, it being undoubtedly of the same genus as the species in our last plate, and possessing, like that, the essential characters of *Carduus* and not of *Serratula*. The English name we have chosen seems to express all Mr. Curtis intended, as well as his epithet *curved*; for the lazy farmer may benefit his fields more by attending to its mode of growth, than by all the curles he perhaps has often tried in



975.

San L. 1800. Published by J. B. L. B. L.

CARDUUS eriophorus.

*Woolly-headed Thistle.*SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with spinous scales.
Receptacle hairy.

SPEC. CHAR. Leaves sessile, pinnatifid, every other
 segment pointing upwards. Calyx globular, woolly.

SYN. *Carduus eriophorus.* *Linn. Sp. Pl.* 1153. *Huds.*
Fl. An. 354. *Witb. Bot. Arr.* 875. *Relb. Cant.*
 307. *Sibth. Ox.* 246.

C. tomentosus, Corona fratrum dictus. Raii Syn. 195.

THE thistle here delineated is the largest British species, and generally esteemed the most uncommon; we have however observed it in various parts of this island on a calcareous soil. Mr. Jacob Rayer gathered the present specimen in Hampshire in August last.

The root is biennial. Stem 3 feet or more in height, erect, much branched, many-angled, hairy. Leaves spreading, alternate, sessile, deeply pinnatifid with two ranks of oblong divaricated segments, alternately pointing upwards and downwards, and armed with very strong spines. The upper side of the leaves is rough with small rigid close-pressed bristles; the under clothed with cottony down. Flowers solitary, terminating the branches, erect, very large, 6 or 8 inches in circumference. Calyx globular, or somewhat depressed; its scales numerous, spreading, thickly interwoven with wool, and mostly terminating in a linear blunt leafy appendage, ciliated and tipped with spines. Florets slender, purple. The radical leaves are often two feet long, and their segments (as Mr. Woodward observes) are much more distinctly ranged in two ranks than those on the stem. The flowers are now and then found white.



Thistle (Cirsium) - Botanical illustration



2



C N I C U S tuberosus.

*Tuberous Plume-thistle.**SYNGENESIA Polygamia-æqualis.*

GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* feathery, deciduous.

SPEC. CHAR. Leaves with slightly-winged stalks, pinnatifid, lobed, fringed with prickles. Stem unarmed, with about two stalked flowers. Calyx-scales lanceolate, pointed, rather spreading.

SYN. *Cnicus tuberosus.* Willd. *Sp. Pl.* v. 3. 1680.

Carduus tuberosus. Linn. *Sp. Pl.* 1154.

Jacea tuberosa. Ger. *em.* 728.

WE readily concur with the opinion of Professor Willdenow, first published in his *Prodr. Berolin.* 261, that *Cnicus* is best distinguished by its feathery seed-down from *Carduus*. With this latter genus then will remain our *nutans*, t. 1112, *acanthoides*, t. 973, *tenuiflorus*, t. 412, and *marianus*, t. 976, only, of the British species.

The plant before us, entirely new to Britain, was discovered last year by our excellent friend A. B. Lambert, Esq. in a wood of his own, called Great Ridge, near Boyton house, Wilts, growing plentifully, in one spot only. It flowers the beginning of August, and is perennial.

The root creeps, sending down many oblong perpendicular knobs. The stem is about two feet high, leafy, furrowed, hairy, without spines, simple, except at the top, where it usually bears two flowers, scarcely more, the figure in Gerarde being, as far as we have observed, faulty in this particular. The leaves are pinnatifid, and variously cut, fringed with copious yellowish prickles, slightly hairy, their base running down into narrow winged foot-stalks. Flowers on long hairy stalks, at first rather drooping, bright purple, with a slightly downy calyx, whose scales have prominent, leafy, minutely spinous, tips. Seed-down feathery.—Linnaeus justly says the flowers are like *heterophyllus*, t. 675, but smaller. It is a very distinct species.



Bot. comp. published by J. L. Smith & Co.



CARDUUS heterophyllus.

*Melancholy Thistle.*SYNGENESIA *Polygamia-aequalis.*GEN. CHAR. *Cal.* swelling, imbricated with spinous scales. *Recept.* hairy. *Down* deciduous.

SPEC. CHAR. Leaves embracing the stem, lanceolate, ciliated, undivided or lacinated, very downy beneath. Flower mostly solitary, pedunculated.

SYN. *Carduus heterophyllus.* *Linn. Sp. Pl.* 1154. *Fl. Dan. t.* 109.*C. helenioides.* *Hudf.* 352. *Lightf.* 457. *Wulb.* 702. *Hull.* 179.*Cirsium Britannicum Clusii repens.* *Raii Syn.* 193.

A NATIVE of rather moist alpine pastures in the north, sent from near Horton in Craven by Mr. Bingley. It is perennial, flowering in July or August.

Root creeping, tuberous, black. Stem 3 feet high, erect, for the most part simple and single-flowered, sometimes, as in our figure, two-flowered, round, furrowed, woolly, leafy. Leaves lanceolate, acute; naked and very smooth above; clothed with dense snowy down beneath; their margin fringed with a double row of small prickles; the radical ones stand on footstalks; the rest are alternate, embracing the stem with their heart-shaped base; some of the leaves are occasionally pinnatifid, which variableness in their form gave occasion to the name *heterophyllus*. The flower terminates the stem on an elongated stalk, and is large and handsome; it has often one little leaf close to its base; at first it droops, but is afterwards erect. Calyx green, slightly downy, ovate; its scales lanceolate, upright, naked, keeled and brownish at their tips, each terminated by a very small spine. Stigma linear, cloven. Down of the marginal seeds merely rough, of the rest feathery.

C. helenioides of Linnaeus differs widely from this, its stem being twice as tall, leaves more numerous, and never lobed. It bears four or more sessile flowers clustered together at the top of the stem, but half the size of ours, and is a stranger to our island.



675



THE
JOURNAL
OF
THE
AMERICAN
MEDICAL ASSOCIATION
PUBLISHED WEEKLY
CHICAGO, ILL., U.S.A.

The American Medical Association was organized in 1847 for the purpose of promoting the science and art of medicine, and of securing the highest quality of medical education and practice. It has since that time been the most powerful and influential organization of its kind in the world. Its members are the leading medical men of every country, and its journals are the most widely read and most authoritative in the profession. The Association has been the source of many important reforms in medicine, and has done much to advance the health of the human race. Its efforts have been directed towards the improvement of medical education, the regulation of the medical profession, and the advancement of medical science. It has been the champion of the patient's rights, and has fought for the most efficient and economical use of medical resources. Its work has been the result of the cooperation of its members, and of the support of the public. The Association is proud of its achievements, and is confident that it will continue to do good work in the future.

CARDUUS pratensis.

*Meadow Thistle.*SYNGENESIA *Polygamia-equalis.*GEN. CHAR. *Cal.* ovate, imbricated with spinous scales. *Receptacle* hairy.

SPEC. CHAR. Leaves sessile, half embracing the stem, lanceolate, slightly dentated, ciliated with small unequal spines. Stem mostly single-flowered.

SYN. *Carduus pratensis.* *Jacq. Flo. Austr. vol. i. t. 42.**Hudj. Fl. An. 353. With. Bot. Arr. 877.**C. dissectus.* *Hudj. Fl. An. ed. 1. 307.**C. heterophyllus.* *Reib. Cant. 306.*

THIS thistle, though found in meadows in various parts of England, has never been well understood. It appears not to be described by Linnæus, nor is it in his Herbarium. The only species of his that it can possibly be is the *dissectus*, a plant he took up from books, without having it in his Herbarium, and which therefore we cannot certainly ascertain. Neither dare we positively say with Dr. Stokes, that this is *C. heterophyllus*, of





CARDUUS acaulis.

Dwarf Thistle.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* ovate, imbricated with spinous scales.
Receptacle hairy.

SPEC. CHAR. Stem wanting. Calyx smooth.

SYN. *Carduus acaulis.* *Linn. Sp. Pl.* 1156. *Huds. Fl. An.* 354. *With. Bot. Arr.* 877. *Relb. Cant.* 307.

Carlina acaulis minore purpureo flore. *Raji Syn.* 195.

THIS species of *Carduus* occurs in gravelly and chalky pastures and commons, very abundantly in Norfolk, though by no means a general English plant. Its large red flowers, which are seldom more than one upon each plant, are very conspicuous, standing close to the root, in the centre of many wide-spreading depressed leaves, which sometimes form a circle of near a foot in diameter, and are so closely applied to the ground that nothing can grow beneath them. These leaves are smooth and shining, of a deep green, pinnatifid, much lobed, and very spinous. Scales of the calyx narrow, smooth, rather obtuse, slightly spinous, sometimes minutely ciliated towards the top. Flower erect, deep crimson, appearing in July or August. The root is strong, woody, and perennial.

When cultivated in a garden, the habit of the plant grows more lax, and a stem is produced, some inches in height, and branched, bearing several flowers. The same thing happens to the *Carlina acaulis* of the south of Europe.



g. Somerby del. H. & A. 1794.



ONOPORDUM Acanthium.

Cotton-Thistle.

SYNGENESIA *Polypetala-aqualis.*

GEN. CHAR. *Cal.* swelling, its scales spreading and spinous. *Recept.* cellular, a little scaly.

SPEC. CHAR. Calyx-scales spreading every way, awl-shaped. Leaves ovate-oblong, sinuated, woolly on both sides.

SYN. Onopordum Acanthium. *Linm. Sp. Pl.* 1158. *Sz. Fl. Brit.* 856. *Hudf.* 354. *Wub.* 704. *Hall.* 180. *Relb.* 307. *Sibth.* 247. *Abbot.* 177. *Cart. Lond. fasc.* 5. t. 57.

Carduus tomentosus, Acanthium dictus, vulgaris. Rati Syn. 196.

IN waste ground about towns, and by road-sides on a gravelly soil, this very conspicuous plant often occurs; on other soils it is entirely unknown, as in most parts of Yorkshire, Derbyshire, and other rocky or mountainous tracts. It flowers in July or August, and is biennial.

The whole herbage is clothed with a white cottony web,



977



See 4. 1802. Published by J. B. B. B.

1

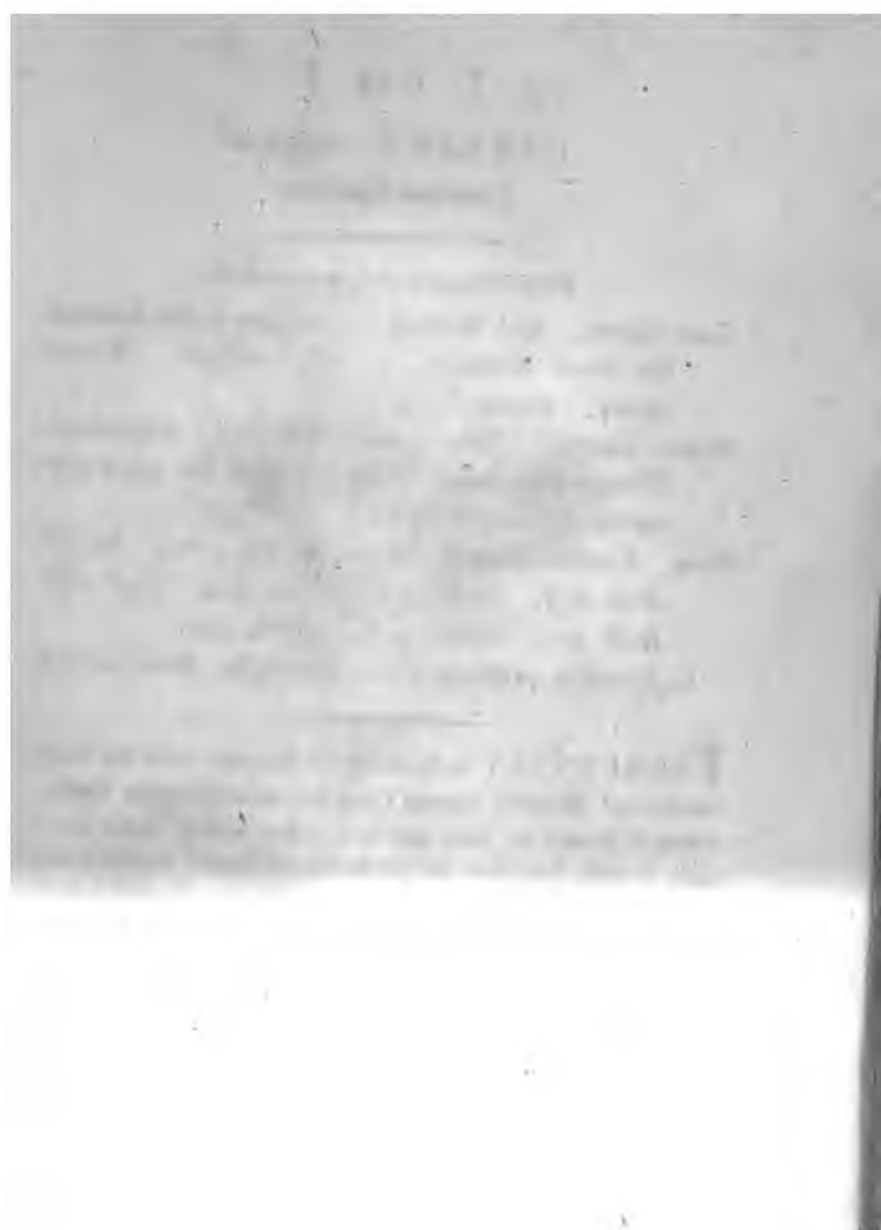
2

3

4

5

6



644.

[1144]

CARLINA vulgaris.

Common Carline.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Cal.* swelling: the outer scales spinous; the inner coloured, scariose, radiant. *Recept.* chaffy. *Stem* feathery.

SPEC. CHAR. Stem many-flowered, corymbose. Flowers terminal. Outer scales of the calyx pinnatifid; inner whitish.

SYN. *Carlina vulgaris.* *Lin. Sp. Pl.* 1161. *Sm. Fl. Brit.* 857. *Huds.* 355. *Willd.* 704. *Hull.* 178. *Roll.* 319. *Sibth.* 247. *Abbot.* 177.

C. sylvestris quibusdam, aliis Atractylis. *Raii Syn.* 175.

FREQUENTLY to be met with scattered over dry sandy heaths and pastures, among Ling and other humble shrubs, where it flowers in June and July, after which, being biennial, it dies, but does not immediately decay, for the leaves and even flowers, which are of the nature of a *Gnaphalium* or *Xanthoxylum*, battered and bleached, stand many a wintry form.

The root is spindle-shaped. Whole plant rigid. Stem





Carduus arvensis L. *Carduus* L.





BIDENS tripartita.

Trifid Bur Marygold.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Down* formed of rigid bristles, rough backwards. *Cal.* of many leaves. *Cor.* sometimes radiated.

SPEC. CHAR. Leaves three-cleft. Calyx leafy at the base. Bristles of the seed two or three, erect.

SYN. *Bidens tripartita.* *Linn. Sp. Pl.* 1165. *Sm. Fl. Brit.* 858. *Hudf.* 355. *With.* 706. *Hull.* 181. *Relb.* 319. *Sibth.* 248. *Abbot.* 177. *Curt. Lond. fasc.* 4. *t.* 57.

Verbescina seu *Cannabina aquatica*, flore minùs pulchro, elatior et magis frequens. *Raii Syn.* 187.

FREQUENT in watery places and about the banks of ditches, flowering in August and September.

Root annual, spindle-shaped. Stem 2 or 3 feet high, upright, branched, spreading, leafy, angular, furrowed, smooth. Leaves opposite, smooth, deeply serrated, cut into one large lobe with two or four smaller at its base. Flowers solitary, terminating each branch, rather drooping, surrounded with several simple, spreading, entire, rough-edged leaves. Calyx-scales nearly equal, flat, smooth, streaked with brown. Florets yellow, uniform, tubular and regular. Scales of the receptacle like the calyx-scales, but narrower. Seeds compressed, furnished with two or three angles which are regularly beset with little reflexed teeth, and terminate in two or three upright triangular bristles, likewise rough with reflexed teeth.

This plant is said to dye woollen and linen cloths yellow, but we have better materials for the purpose in common.



Helianthus scaberrimus L.



B I D E N S cernua.
Nodding Bur Marygold.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Recept.* chaffy. *Down* formed of rigid bristles, rough backwards. *Cal.* of many leaves. *Cor.* sometimes radiated.

SPEC. CHAR. Leaves lanceolate, serrated. Flowers drooping, leafy at their base. Bristles of the seed about four, erect.

SYN. *Bidens cernua.* *Linn. Sp. Pl.* 1165. *Sm. Fl. Brit.* 858. *Huds.* 356. *With.* 705. *Hull.* 181. *Relb.* 320. *Sibth.* 248. *Abbot.* 177. *Curt. Lond. fasc.* 3. t. 55.

Verbesina pulchriore flore luteo. *Raii Syn.* 187.

LESS common than the preceding species, but not very rare in ponds and ditches on a gravelly soil, growing in the water and blossoming in September.

Root annual, branching. Stem often roughish, and less spreading than the other. Leaves embracing the stem, undivided, lanceolate, deeply serrated. Flowers remarkably drooping, larger and of a brighter yellow than those of *B. tripartita*; the angles of the seeds moreover are less regularly spinous, and their bristles four instead of 2 or 3. Sometimes the flowers are furnished with large radiant ligulate marginal female florets, in which case the plant becomes *Cereopsis Bidens* of Linnæus, and is one proof among others that nature has fixed no strict limits between the orders *Polygamia-æqualis* and *Polygamia-superflua*, the latter being somewhat analogous to double flowers in other classes.

The *Bidens minima* of Linnæus and others is only a starved plant of this species growing out of the water.



Helianthus scaberrimus L. Greene, Greene



EUPATORIUM cannabinum.

Hemp-agrimony.

SYNGENESIA *Polygamia-æqualis.*

GEN. CHAR. *Receptacle naked. Seed-down feathery. Calyx oblong, imbricated. Style cloven half way down, longer than the corolla.*

SPEC. CHAR. *Leaves digitate.*

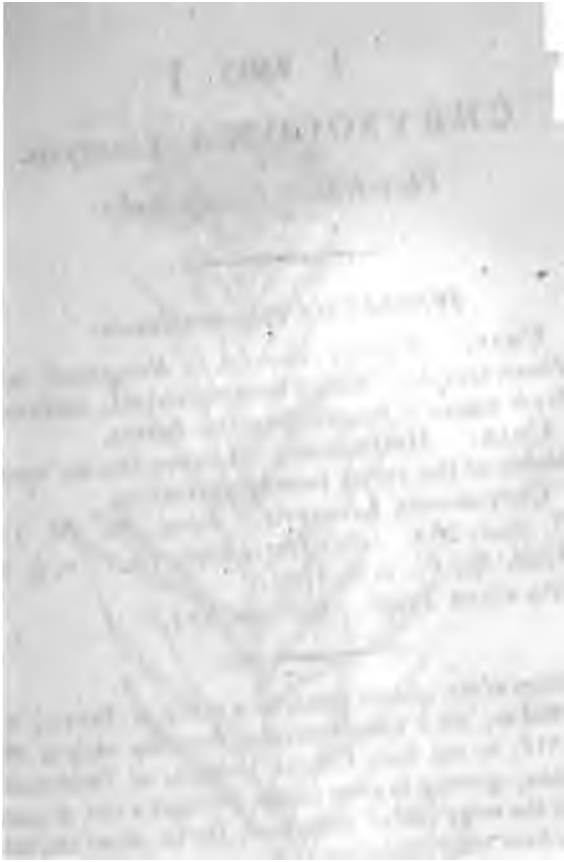
SYN. *Eupatorium cannabinum. Linn. Sp. Pl. 1173. Huds. Fl. An. 356. With. Bot. Arr. ed. 3. v. 3. 706. Reih. Cant. 309. Sibth. Ox. 249. Raii Syn. 179.*

THIS plant occurs frequently about the banks of rivers, and other watery spots.—It is nevertheless found also in elevated calcareous situations, where it appears to great advantage, as at Matlock; but always grows in a more or less black and boggy soil, like the larger inhabitants of alpine meadows, *Veratrum*, *Geranium*, *Aconitum*, *Cacalia*, &c. It seems indeed to supply the place of *Cacalia alpina*, in some of our mountainous thickets, and very much agrees with that plant in habit, colour, and the insects it nourishes.





Jan 6 1796 Kilmacuddy J. H. Edwards London.



[2505]

CHRYSOCOMA Linosyris.

*Flax-leaved Goldy-locks.*SYNGENESIA *Polygamia æqualis.*

GEN. CHAR. *Flowers* discoid. *Receptacle* naked.
Down simple. *Calyx* hemispherical, imbricated.
Style scarcely longer than the florets.

SPEC. CHAR. Herbaceous. Leaves linear, smooth.
 Scales of the calyx loosely spreading.

SYN. *Chrysocoma Linosyris.* Linn. Sp. Pl. 1178.
Fl. Succ. 283. *Ait. Hort. Kew.* ed. 1. v. 3. 163.
Willd. Sp. Pl. v. 3. 1791.

Linaria aurea Tragi. *Ger. em.* 554.

NO tidings of the present plant, as a native of Britain, have ever reached us, till it was discovered, flowering early in September 1812, by the Rev. Charles Holbech, of Farnborough, Warwickshire, growing in great plenty, amongst a turf of coarse grasses, on the rocky cliff of Berryhead, Devon, about two hundred paces from the westernmost battery, on the Dartmouth side, indubitably wild. This is the small variety, which alone, as Linnaeus tells us, grows in the south part of the isle of Oeland. The plant is mentioned as a native of most parts of Germany, as well as of Switzerland, and the south of France. It is scarcely cultivated but in botanic gardens. As we find no coloured figure cited, ours will be the more generally acceptable. Some old authors appear to have described and figured this *Chrysocoma* twice over, misled by its variableness of magnitude.

The root is perennial and creeping, with long stout fibres. Stem erect, round, rigid, simple, smooth, leafy, a foot high, or not so much. Leaves numerous, scattered, linear, acute at each end, entire, rather fleshy, rough with minute white points. Flowers few, terminal, corymbose, of an uniform yellow; their stalks hardly scaly in our specimens. Florets about thirty, uniform, acute. Seeds hairy. Down minutely rough. Cells of the receptacle with a slight jagged border, not amounting to scabiness.



Described by J. B. Smith



2

SANTOLINA *maritima*.

Sea Cotton-weed.

SYNGENESIA *Polygamia-æqualis*.

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* imbricated, hemispherical.

SPEC. CHAR. Flower-stalks collected into a corymbus. Leaves oblong, obtuse, crenated, very downy.

SYN. *Santolina maritima*. *Linn. MSS. Hudf. Fl. An.* 356. *Witb. Bot. Arr.* 886.

Athanasia maritima. *Linn. Sp. Pl.* 1182. *Mant.* 2. 464.

Gnaphalium maritimum. *Raii Syn.* 180.

THIS specimen was gathered last August by Dr. Smith, on the sea beach, just above high-water mark, a mile to the north of Landguard Fort in Suffolk, where this rare plant grows in tolerable plenty, and flowers from the middle of August to the latter part of September. It occurs also on various parts of our southern coast.

The long perennial roots run very deep into the sand, and throw up several branched bushy stems about a foot high, extremely brittle, round, covered with numerous, alternate, oblong, almost spatulate, crenate leaves, which, as well as the stem and calyx, are completely invested with a pure-white thick cottony web. A corymbus of bright yellow flowers terminates the stem and side branches. The calyx is formed of numerous concave, somewhat membranous, scales; and the hemispherical receptacle is set with similar scales, woolly at their tip. The florets are numerous, all tubular, regular, hermaphrodite and fertile. Seeds oval, curved, compressed, sharp and membranous at the edge, destitute of wing or down. Every part, especially the flowers, has a strong aromatic scent, like Costmary (*Tanacetum Balsamita*).

Those who go to look for these flowers in July, according to the information of authors, will be disappointed. All the figures of this plant, Miller's not excepted, are extremely bad.



Callitriche sp. 1892



[1229]

TANACETUM vulgare.

*Common Tansy.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned. *Cal.* imbricated, hemispherical. *Florets* of the radius three-cleft, obsolete; sometimes wanting.

SPEC. CHAR. Leaves doubly pinnatifid, deeply serrated, naked.

SYN. *Tanacetum vulgare.* *Linn. Sp. Pl.* 1184. *Sm. Fl. Brit.* 862. *Huds.* 357. *With.* 708. *Hull.* 182. *Relh.* 321. *Sibth.* 249. *Abbot.* 179. *Woodv. Med. Bot. t.* 115.

Tanacetum. *Raii Syn.* 188.

THIS well-known plant not unfrequently occurs in hilly pastures and by road sides, generally in large patches, flowering in July and August. It abounds on Newmarket heath, where our specimen was gathered.

Root perennial, creeping. Stems erect, a foot or two in height, scarcely branched, leafy, angular. Leaves numerous, alternate, clasping the stem, spreading but little, deeply divided into numerous, uniform, oblong, deeply serrated lobes, all naked or destitute of pubescence, except occasionally underneath, though harsh and rough to the touch. Flowers in a terminal flat corymbus, of a full uniform yellow, hemispherical. Perfect florets of the disk tubular, 5-cleft, very numerous; those of the radius few, ligulate, tipped with 3 teeth, but often wanting, and when present so short and inconspicuous as not to be observable without attention. Seeds obovate, each bearing a 5-sided chaffy crown.

The whole plant is very bitter, and exhales a peculiar strong scent. It is recommended in several disorders as a tonic and cordial, as well as to expel worms. It also serves to give its flavour to a kind of rich pudding, now grown obsolete in England, and seldom seen but at corporation feasts.

A curled variety, noticed by Dillenius, is now and then seen in gardens, and is esteemed more grateful to the stomach than the wild plant.



Foeniculum vulgare Mill. *Fennel*. By J. Sowerby. London.



ARTEMISIA campestris.

Field Southernwood.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Receptacle* slightly downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Flowers* of the radius without a corolla.

SPEC. CHAR. Leaves in many linear segments. Stems procumbent before flowering, wand-like.

SYN. *Artemisia campestris.* Linn. *Sp. Pl.* 1185.
Huds. Fl. An. 357. *With. Bot. Arr.* 889.

Abrotanum campestre. Raii *Syn.* 190.

THE field southernwood has hitherto been found in no part of England but about Thetford, where it was discovered in Ray's time, and still grows by the side of the great road about a mile from that town in the way to Norwich, and also on Icklingham heath, eight miles from Bury, from whence the wild specimen here delineated was sent by Sir Thomas Cullum, Bart.

The whole herb is without smell, and flowers in August.

Root perennial, producing the first year a number of long-stalked pinnated and deeply divided leaves, spreading flat on the ground in the form of a star; from the centre of which the stem comes out the summer following, prostrate at first, but rising when the flowers appear, branched, and clothed with alternate, more sessile, and less compound leaves, the uppermost being perfectly simple. The segments of all the leaves are linear, more or less clothed with close-pressed silky hairs beneath. Branches forming long simple racemes of small drooping flowers on slender foot-stalks, each accompanied by a small simple leaf. The receptacle, as Linnæus observes, in this and some other species, is naked, and not downy.



Samolus prostratus L. *Samolus* *prostratus* L.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT TO THE PRESENT TIME

By SAMUEL JOHNSON, LL.D.
OF THE UNIVERSITY OF OXFORD.
IN TWO VOLUMES.
VOL. I.
LONDON: Printed by J. JOHNSON, in Pall-mall.
1790.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT TO THE PRESENT TIME
By SAMUEL JOHNSON, LL.D.
OF THE UNIVERSITY OF OXFORD.
IN TWO VOLUMES.
VOL. II.
LONDON: Printed by J. JOHNSON, in Pall-mall.
1790.

ARTEMISIA maritima.
Drooping-flowered Sea Wormwood.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves downy, pinnated: the uppermost undivided. Clusters drooping. Receptacle naked. Flowers oblong, downy, sessile.

SYN. *Artemisia maritima.* Linn. *Sp. Pl.* 1186. Willd. *Sp. Pl. v. 3.* 1833. Sm. *Fl. Brit.* 864, α , β . Huds. 358. With. 709. Hull. 182. Relh. 321. Woodv. *Med. Bot. t.* 122.

Absinthium marinum album. Raii *Syn.* 188. n. 2. also 3, 4 and 6.

AT the persuasion of Mr. Turner and Professor Willdenow we have been induced to reconsider the Sea Wormwoods, and it appears that two distinct species are common on our muddy shores, distinguished by having drooping or upright flowers, which differences seem to be constant, and to be accompanied with differences in the general aspect of the plants.

This is the *A. maritima* of the Linnæan Herbarium, and of all authors, being the more common of the two. It is subject to varieties in the breadth and hoariness of its leaves, and when our *t.* 1001 was published, we thought we had found the posture of the flowers also variable. We take the first opportunity of correcting this mistake, and would substitute for what is given in *v.* 14, at *t.* 1001, the following character and synonyms.

ARTEMISIA gallica.
Upright-flowered Sea Wormwood.

SPEC. CHAR. Leaves downy, pinnated; the radical ones capillary: the uppermost undivided. Clusters erect. Receptacle naked. Flowers oblong, downy, partly sessile, of few florets.

SYN. *Artemisia gallica.* Willd. *Sp. Pl. v. 3.* 1834.

A. maritima γ . Sm. *Fl. Brit.* 864.

Absinthium seriphium tenuifolium marinum narbonense. Dill. in Raii *Syn.* 189.

1706



Febr. 1803. Published by J. C. Smith, London.



[1001]

ARTEMISIA maritima.

*Sea Wormwood.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves in many deep divisions, downy. Clusters drooping. Receptacle naked. Female florets about three.

SYN. *Artemisia maritima.* *Linn. Sp. Pl.* 1186. *Sm. Fl. Brit.* 864. *Huds.* 358. *Willd.* 709. *Hull.* 182. *Relb. Suppl.* 2. 14. *Woodv. Med. Bot.* 1. 122.

Abinthium marinum album. *Raii Syn.* 188. n. 2. also n. 3, 4, 5 and 6.

NOT uncommon in muddy places about the sea coast, flowering in August and September.

Root woody, perennial. Whole plant clothed with a grey cottony down. Stems erect or prostrate, panicled, leafy, a foot or more in height. Lower leaves pinnate; leaflets three-cleft; upper ones variously, but for the most part deeply, divided; segments all entire: uppermost leaves often simple. Clusters of flowers generally more or less drooping. Flowers ovate. Calyx woolly; its scales brownish, with a membranous edge. Receptacle quite naked. Florets of the radius never more than 2 or 3, and often wanting.

This plant has the qualities of the Common Wormwood, but is less bitter, and more agreeable in its flavour. Some occasional variations in this respect, as well as in the breadth and hoariness of the leaves, density of the clusters, and size of the flowers, gave occasion to our botanists in the time of Dillenius to make several species, which he judiciously considers as varieties. We have actually traced most of them to their origin, and strongly suspect the *A. cærulea* of Hudson to have been no other than the *maritima*, with broader and more simple upper leaves than usual.



1166



1

[1230]

ARTEMISIA Absinthium.

Common Wormwood.

SYNGENESIA Polygamia-superflua.

- GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awl-shaped, undivided.
- SPEC. CHAR. Leaves in many deep divisions, clothed with close silky down. Flowers hemispherical, pendulous. Receptacle hairy.
- SYN. *Artemisia Absinthium.* Linn. *Sp. Pl.* 1188. Sm. *Fl. Brit.* 865. Huds. 358. With. 710. Hull. 182. Reth. 322. Sibth. 250. Abbot. 179. Woodv. *Med. Bot.* t. 120.
- Absinthium vulgare.* Raii Syn. 188.

WORMWOOD grows in the midst of almost every english village, particularly where the soil is chalky or gravelly. There, on many a rugged dusty green, where the whipping-post and stocks, with their appropriate distich

"Fear God and honour the King,
Or else they will you into me bring,"

are, as Shakespear says, *wormwood* to the idle and disorderly, this herb is sure to be met with. It is perennial, and flowers in August.

The stems form tufts about a foot high, and are furrowed, branched and leafy. The whole plant is of a pale whitish green, and clothed with short or close-pressed silky down. Leaves alternate, doubly but irregularly pinnatifid, their edges entire. Clusters of flowers collected into a leafy panicle. Each flower is broad and hemispherical, drooping: the disk buff-coloured. The styles are large, recurved, with cloven stigmas. The florets of the radius short, and rather ovate. Receptacle very hairy.

This plant is remarkable for its intense bitterness united to a peculiar strong aromatic odour. It is often used to keep insects from clothes and furniture. As a medicine it is one of the most active bitters, and from its effect upon the nerves not to be used without caution. The vegetable alkali of the shops was for a long time procured from this plant exclusively.



[1878]

ANTHONY & CO.

NEW YORK

1878

RECEIVED

THE NEW YORK PUBLIC LIBRARY
ASTOR LENOX TILDEN FOUNDATION
115 N. 4TH ST. N.Y.C.
JAN 10 1878
THE NEW YORK PUBLIC LIBRARY
ASTOR LENOX TILDEN FOUNDATION
115 N. 4TH ST. N.Y.C.
JAN 10 1878
THE NEW YORK PUBLIC LIBRARY
ASTOR LENOX TILDEN FOUNDATION
115 N. 4TH ST. N.Y.C.
JAN 10 1878

Very respectfully,
ANTHONY & CO.

ARTEMISIA vulgaris.

*Mugwort.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awl-shaped, undivided.

SPEC. CHAR. Leaves pinnatifid, flat, cut; downy beneath. Clusters simple. Flowers ovate. Receptacle naked.

SYN. *Artemisia vulgaris.* Linn. *Sp. Pl.* 1188. Sm. *Fl. Brit.* 865. Hudf. 359. Willd. 710. Hull. 182. Relb. 311. Sibth. 250. Abbot. 179. Woods. *Med. Bot.* t. 121. Rati Syn. 190.

VERY common in waste ground, hedges, and borders of fields, flowering throughout August and later.

Root woody and perennial. Stems 3 or 4 feet high, erect, branched, leafy, marked with numerous longitudinal purplish ribs, smooth. Leaves alternate, pinnatifid, somewhat lyrate, unequally cut; smooth and dark-green above; cottony and very white beneath. Flowers in axillary simple leafy spikes or clusters, erect, or divaricated, ovate, sessile, downy. Tubular florets several, 5-cleft, purplish, furnished with 5 stamina and a cloven pistillum, and surrounded by 5 awl-shaped female flowers which constitute the radius. Receptacle naked. Seeds angular, without down or wing.

The whole plant has a weak aromatic scent, and a slightly bitter flavour. Its medical virtues deserve no notice.—There is a variety destitute of all redness about the stem or flowers, equally common with that we have delineated.

978.



Verbena officinalis L.



ARTEMISIA cærulescens.

Blueish Mugwort.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves hoary; those of the stem lanceolate and undivided; the lower ones variously divided. Flowers erect, cylindrical. Receptacle naked.

SYN. *Artemisia cærulescens.* Linn. *Sp. Pl.* 1189. *Sm. Fl. Brit.* 866. *Huds.* 359. *With.* 711. *Hull. ed.* 2. 238.

A. marina. Ger. *em.* 1104.

Absinthium maritimum, lavendulæ folio: Bauh. *Pin.* 139. *Moris. sect.* 6. *t.* 1. *f.* 5. *Duham. Arb.* v. 1. 24. *t.* 7.

THAT no plant, asserted by any good authority to be a British native, may be wanting in this work, we are obliged to delineate a garden specimen of this, very expressively called by old writers Lavender-leaved Mugwort or Wormwood. Mr. Tofield assured his friend Hudson that it grew wild near Boston in Lincolnshire; which might very well be, as it is not uncommon on the sea shores of the milder climates of Europe. Gerarde says it grows in the isle of Wight; yet no botanist has recently found it in Britain. Mr. Tofield might mistake some variety of *maritima*, *t.* 1706, or *gallica*, *t.* 1001, for this; yet if the plants be compared, such an error seems very unlikely, especially as the *cærulescens* is well known to most botanists.

Its glaucous hoary hue, leaves for the most part simple, lanceolate, bluntish and entire, of a considerable breadth, the lowermost only being lobed or pinnatifid, strongly mark the species. The flowers are abundant in August and September, and stand erect. The receptacle is naked and very minute.



Junonia pallens (L.) G. & H.

[1002]

GNAPHALIUM luteo-album.

*Jersey Cudweed.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or scathery.
Cal. imbricated; with coloured membranous scales.
Florets of the radius awlshaped. Some *florets* of
 the disk occasionally abortive.

SPEC. CHAR. Herbaceous. Leaves half embracing
 the stem, swordshaped, waved, woolly on both
 sides : the lower ones blunt. Flowers clustered.

SYN. *Gnaphalium luteo-album.* *Linn. Sp. Pl.* 1196.
Sm. Fl. Brit. 867. *Huds.* 359. *Willd.* 712.
Hull. 183. *Dicks. H. Sicc. fasc.* 5. 13.

Elichrysum sylvestre latifolium, capitulis conglobatis.
Raii Syn. 182.

RAY and his friends made no scruple of allowing a place
 in the British Flora to the plants of Jersey and Guernsey,
 though those of Gibraltar might almost as well be admitted.
 The *Gnaphalium* now before us is said to be very frequent in
 dry barren places in the first mentioned island, flowering in



I 1108 Ist

MEMORANDUM
of the Proceedings of the
Board of Directors of the
City of New York

at a meeting held on

the 11th day of

January, 1908

at the City Hall

in the City of New York

for the purpose of

considering the

report of the

Commissioner of

the City of New York

relative to the

proposed

amendment to the

City Charter

relating to the

election of

the Mayor

and the

Commissioner

of the City

of New York

and the

Board of

Directors

of the City

of New York

and the

Board of

[2018]

GNAPHALIUM margaritaceum.

*American Cudweed, or Pearly Everlasting.*SYNGENESIA *Polygamia-superflua*.

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awlshaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Herbaceous. Leaves linear-lanceolate, sharp-pointed, alternate. Stem branched upwards. Corymbs level-topped.

SYN. *Gnaphalium margaritaceum*. *Linn. Sp. Pl.* 1198. *Sm. Fl. Brit.* 868. *Huds.* 360. *With.* 712. *Hull.* 183. ed. 2. 239. *Dicks. H. Sicc. fasc.* 8, 15.

G. americanum. *Raii Syn.* 182.

A NATIVE of moist places near the banks of rivers, but Ray judged it scarcely wild, probably because it is known to abound in America. Our much esteemed friend the Rev. T. Butt sent it from a rivulet in the heart of Wire forest, Worcestershire, and Dr. Salt gathered it by a rivulet at Longdon near Litchfield. Mr. Middleton of Malton, Yorkshire, sent a specimen to Mr. Sowerby from the river Rhymney, Glamorganshire, where, as Dillenius records, it is abundant, and, Mr. Middleton thinks, certainly wild. This flower, from its purity and durability, an elegant emblem of immortality, is planted, as that gentleman informs us, "in the church-yards of South Wales to decorate the graves of the dead;" hence it becomes naturalized in such places. It is a common favourite in cottage gardens throughout many parts of England, flowering in August.

Root perennial, somewhat creeping. Plant 2 or 3 feet high cottony, especially the backs of the leaves. Flowers numerous, corymbose, slightly aromatic, most beautiful before they expand, the pure opaque unchangeable whiteness of the calyx being then most conspicuous. The disk is of a deep yellow. Receptacle granulated. Seed-down rough.

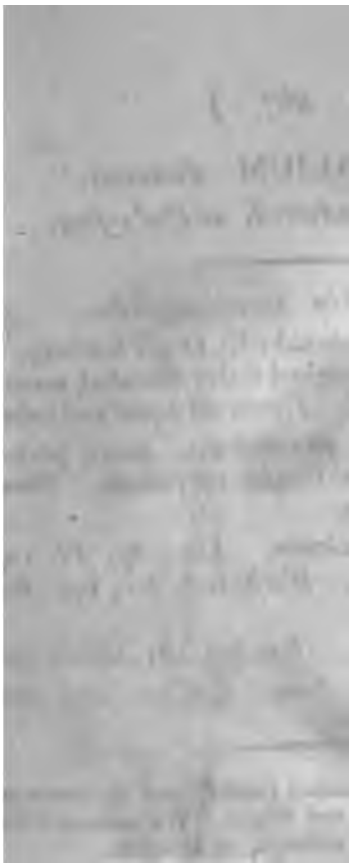
2018



Myr. 1889. Published by J. Sowerby, London.

|

|



GRAPH
Memorandum

General

Special

Technical

Administrative

Financial

Legal

Medical

Physical

JOHN D. ...
Director of ...
Mr. William ...
The ...

GNAPHALIUM dioicum.

*Mountain Cudweed, or Cat's-foot.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* feathery. *Cal.* imbricated; its marginal scales rounded, membranous and coloured. *Florets* all equal and tubular.

SPEC. CHAR. Shoots procumbent. Stem perfectly simple, bearing a simple corymbus. Flowers dicecious.

SYN. *Gnaphalium dioicum.* *Linn. Sp. Pl.* 1199. *Huds. Fl. An.* 360. *With. Bot. Arr.* 894. *Relb. Cant.* 311

G. montanum album. *Raii Syn.* 181. barren plant.

G. longiore folio et flore. *Raii Syn.* 182. fertile plant.

FOUND on dry mountainous heaths, and in barren pastures of England, Scotland, and Wales. We received it from Mr. William Travis of Scarborough, in June last.

The roots are somewhat woody, creeping, perennial, and throw out long simple fibres which run deep into the ground. Runners several, leafy, procumbent, spreading in every direction. Leaves pointed, entire, bright green and smooth above, very white and cottony beneath; the radical ones, as well as those on the procumbent shoots, are spatulate and



I

II

■

GRAPHICAL REPRESENTATION
OF THE

STATISTICS OF THE

POPULATION OF THE UNITED STATES
IN 1870
BY
J. M. SMITH
OF THE
BUREAU OF THE CENSUS
WASHINGTON
1872

Published by the Government Printing Office, Washington, D.C.

GNAPHALIUM sylvaticum.

*Highland Cudweed.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem simple, erect. Flowers spiked. Leaves lanceolate, tapering at the base, woolly on both sides.

SYN. *Gnaphalium sylvaticum.* *Linn. Sp. Pl.* 1200. *Sm. Fl. Brit.* 870. *Lighf.* 472, variety. *With.* 713. *Hull.* 183.

G. norvegicum. *Retz. Prod.* 193.

SOME account of this species of *Gnaphalium* will be found in our 2d volume, p. 124, where our *G. rectum*, which has generally been confounded with it, is figured. The two plants are indeed nearly akin, but we still think them distinct.

That now under consideration grows on several highland mountains, and has been sent us wild by Mr. G. Don, and Mr. J. Mackay; the latter informs us it is not found in woods, though Linnæus expressly asserts the contrary, and we have no reason to think, from his definition in the *Fl. Lapp.* or from his herbarium, that he gathered both species in Lapland, though he confounded their synonyms. If he did, he is responsible both for his own error and the badness of the specific name.

The root is black, perennial, furnished with many simple fibres. Stem from 4 to 6 inches high, leafy, woolly. Leaves alternate, lanceolate, entire, acute, narrow and elongated at their base, clothed on both sides with white cottony down. Spike terminal, leafy, dense, almost perfectly simple, except when very luxuriant. Flowers much like those of *G. rectum*, except that the calyx-scales are more compact, and much blacker towards their extremities.

913.



Sp. 1. var. latifolia by J. Harvey & others

7

1

1

1

1

GNAPHALIUM rectum.

*Upright Cudweed.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* feathery. *Cal.* imbricated; its marginal scales rounded, membranous and coloured. *Florets* all equal and tubular.

SPEC. CHAR. Stem erect, terminating in a leafy compound spike. Leaves linear-lanceolate, almost naked on the upper side.

SYN. *Gnaphalium rectum.* *Baub. Hist. vol. 3. part 1, p. 160.*

Gn. sylvaticum. *Huds. Fl. An. 360. With. Bot. Arr. 895. Relb. Cant. 312. Lightf. Fl. Scot. 472. Retz. Fl. Scand. 156.*

Gn. anglicum. *Raii Syn. 180. Ger. em. 639.*

ANATIVE of groves, thickets and pastures in a light sandy soil in many places, sent from Bedfordshire by the Rev. Mr. Abbot. It flowers in the latter part of Summer, and is easily perceived. The root is perennial.

We cannot but agree with Prof. Retzius, who, in his *Floræ Scandinaviæ Prodrömus*, has distinguished this from another species of *Gnaphalium*, with which Linnæus confounded it. The real *Gn. sylvaticum* of the last named author, intended by him in *Fl. Lapp.* and *Sp. Plant.* is the *Gn. norvegicum* of Retzius, and *Fl. Dan.* 254, as appears from original ancient specimens in the *Herb. Linn.* as well as from the specific character; though it also appears from the *Cliffortian Herbarium*, now in the possession of Sir J. Banks, and indeed from many of his synonyms throughout, that Linnæus confounded the two together, as many other botanists have done. As these species are unquestionably distinct, it becomes necessary to give ours another trivial name, and we have chosen that of John Bauhin for its aptness as well as its antiquity.

The real *sylvaticum* is a native of alpine woods, and is what Mr. Lightfoot speaks of as a variety (p. 472). We hope at some future period to give a figure of it; in the mean time *Fl. Dan.* t. 254, is a good representation, which Mr. Woodward and Dr. Stokes truly remarked (*With.* 895.) did not well suit our lowland plant. That which it describes differs from our *Gn. rectum* in having broader leaves, more attenuated however at the base, and less naked on the upper surface; and a short dense simple spike of flowers, with a blacker calyx.



Samolus det. J. C. Smith

1897

GRANVILLE H. WILSON
Distinguished Engineer

MEMORIAL ADDRESS

By
JOHN C. WILSON, President of the American Society of Civil Engineers
and
President of the American Society of Mechanical Engineers
Delivered at the Annual Meeting of the American Society of Civil Engineers
at New York, N. Y., December 28, 1897
Published by the American Society of Civil Engineers
New York, N. Y., 1898

Entered as second-class matter, October 3, 1878.
Postpaid.

2

GNAPHALIUM supinum.
Dwarf Cudweed.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery.
Cal. imbricated; with coloured membranous scales.
Florets of the radius awl-shaped. Some *florets* of
the disk occasionally abortive.

SPEC. CHAR. Stem decumbent, simple, racemose.
Flowers few. Leaves linear-lanceolate, downy on
both sides.

SYN. *Gnaphalium supinum.* *Linn. Syst. Nat. ed. 12.*
v. 3. 234. Sm. Fl. Brit. 871. Huds. 361. With. 714.
Hull. 183. Dicks. H. Sicc. fasc. 2. 17.

G. alpinum. *Lightf. 470. t. 20. f. 2.*

FOUND on the summits of the Scottish alps in a micaceous
soil, flowering in July. Mr. Lightfoot, not adverting to the
description of this plant in the appendix to the *Syst. Nat.*,
took it, with some hesitation, for *G. alpinum* of Linnæus, a
species much more resembling the *dioicum*, and not yet noticed
in Britain. Linnæus for some time neglected the plant now
under consideration, as a dwarf variety of *G. sylvaticum*.

It has a perennial creeping blackish root. Stems 2, 3, or
4 inches long, simple, slender, leafy, a little woolly, seldom
quite erect, and often nearly prostrate. Leaves alternate,
linear-lanceolate, entire, narrow, more or less woolly on both
sides. Flowers few, in a simple loose leafy cluster; sometimes
in dwarf plants solitary; erect, rather larger than in *G. sylvaticum*,
t. 913, or *rectum*, *t. 124*; the calyx-scales are also
longer, sharper, and of a paler more uniform brown than in
those species. Florets all fertile. Seeds compressed, polished
Receptacle reticulated.



[104]

EXAMINATION OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

STATE OF THE

[1194]

GNAPHALIUM uliginosum.

Marsh Cudweed.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery.
Cal. imbricated; with coloured membranous scales.
Florets of the radius awl-shaped. Some *florets* of
the disk occasionally abortive.

SPEC. CHAR. Stem much branched, spreading.
Flowers in terminal tufts.

SYN. *Gnaphalium uliginosum.* *Linn. Sp. Pl.* 1200.
Sm. Fl. Brit. 872. *Huds.* 361. *With.* 715.
Hull. 183. *Relh.* 324. *Sibth.* 251. *Abbot.* 180.
Dicks. H. Sicc. fasc. 2. 18.

G. longifolium humile ramosum capitulis nigris. Raii
Syn. 181.

THIS species of *Gnaphalium* is easily to be found on sandy wet commons, where water has stood in winter, and is not less easily known from every other of British growth. Its very numerous spreading branches, each terminated by a dense head of yellowish-brown shining flowers, encompassed with many leaves, mark it sufficiently.

The root is small and annual. Stem about a span high, branched from the bottom, its branches spreading in all directions, but erect at their extremities, alternately subdivided, leafy, clothed with very white cottony down. Leaves alternate, linear-lanceolate, taper at their base, woolly on both sides, but less so than the stem. The flowers appear in August. The calyx-scales are lanceolate, acute, of a pale yellowish brown. Florets all fertile, yellow. Receptacle reticulated.







GNAPHALIUM gallicum.

*Narrow-leaved Cudweed.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem erect, branched. Leaves linear, revolute, acute. Flowers awl-shaped, axillary, crowded.

SYN. *Gnaphalium gallicum.* *Huds.* 361. *Sm. Fl. Brit.* 872. *With.* 715. *Hull. ed.* 2. 239. *Dicks. H. Sicc. fasc.* 11. 10.

G. parvum ramosissimum, foliis angustissimis, polyspermon. *Raii Syn.* 181. *Pluk. Phyt.* t. 298. f. 2.

Filago gallica. *Linn. Sp. Pl.* 1312.

MUCH doubt has arisen concerning this Cudweed as a native of Britain, because it is not now to be found in the sandy fields about Castle Heveningham in Essex, where Dale formerly observed it to be plentiful. Plukenet's figure however precludes all uncertainty as to Dale's plant, and Mr. Woodward is mentioned in the Botanist's Guide, 191, to have noticed the same in Derbyshire. We have only seen garden specimens. It is annual, flowering in July and August, and likes a poor dry gravelly soil.

The root is small and tapering. Stems one or more, a span high, leafy, simple below, repeatedly branched in a corymbose form above. Leaves scattered, narrow, slightly revolute. Flowers small, sessile, and mostly crowded, among some of the leaves; tumid at their base; closed and tapering upwards. Calyx-scales narrow, keeled, membranous at the tip. Florets of the disk about 3, tubular, brownish yellow; those of the radius several, very slender. The germens seem all to be usually fertile. Seed-down rough. Receptacle small, convex, granulated. The whole herb is cottony, with a pretty silvery aspect.





12-11-77

12-11-77

12-11-77

GNAPHALIUM minimum.

*Least Cudweed.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awlshaped. Some *florets* of the disk ~~caus~~ *abortive*.

SPEC. CHAR. *Stem* erect. *Leaves* lanceolate, acute, flat. *Fls.* conical, rather clustered, both lateral and terminal.

SYN. *Gnaphalium minimum* n. *Sm. Fl. Brit.* 873.
Raii Syn. 181. *Relb.* 4.

G. montanum. *With.* 715. *Hull.* 183.
Filago montana. 2. *Abbot.* 189.

PLENTIFUL on the most barren ground, about the margins of gravel-pits, and other dry sandy places, where it flowers from July to the end of autumn, varying greatly in luxuriance according to the nourishment or moisture it receives.

Root annual, small but tough. Stem erect, a few inches high, round, leafy, a little woolly; slender, simple, and naked below; branched and corymbose above. Leaves alternate, upright, lanceolate, or a little ovate, acute, entire, flat, woolly on both sides. Flowers small, sessile, either scattered or in clusters, axillary or terminal, conical, angular, woolly. Calyx-scales awl-shaped, keeled, membranous at the tip; the inner ones entirely so. Hermaphrodite florets from 4 to 8, tubular, regularly 5-cleft, yellow: female ones slender, filiform: all producing perfect seed. Down rough. Receptacle tuberculated.

Former writers have mistaken this for the *Filago montana* of Linnæus, a plant not found in Britain, which is twice as large in all its parts and much more woolly, as appears by the Linnæan Herbarium.



Sp. 1. 1840. Published by J. Sowerby London.

GNAPHALIUM germanicum.

*Common Cudweed.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem erect, proliferous. Leaves lanceolate. Heads globose, many-flowered, lateral as well as terminal.

SYN. *Guaphalium germanicum.* *Sm. Fl. Brit.* 874. *Huds.* 362. *With.* 716. *Hull.* 184.

G. minus, seu *Herba impia.* *Raii Syn.* 180.

Filago germanica. *Linn. Sp. Pl.* 1311. *Relb.* 327. *Sibth.* 262. *Abbot.* 189.

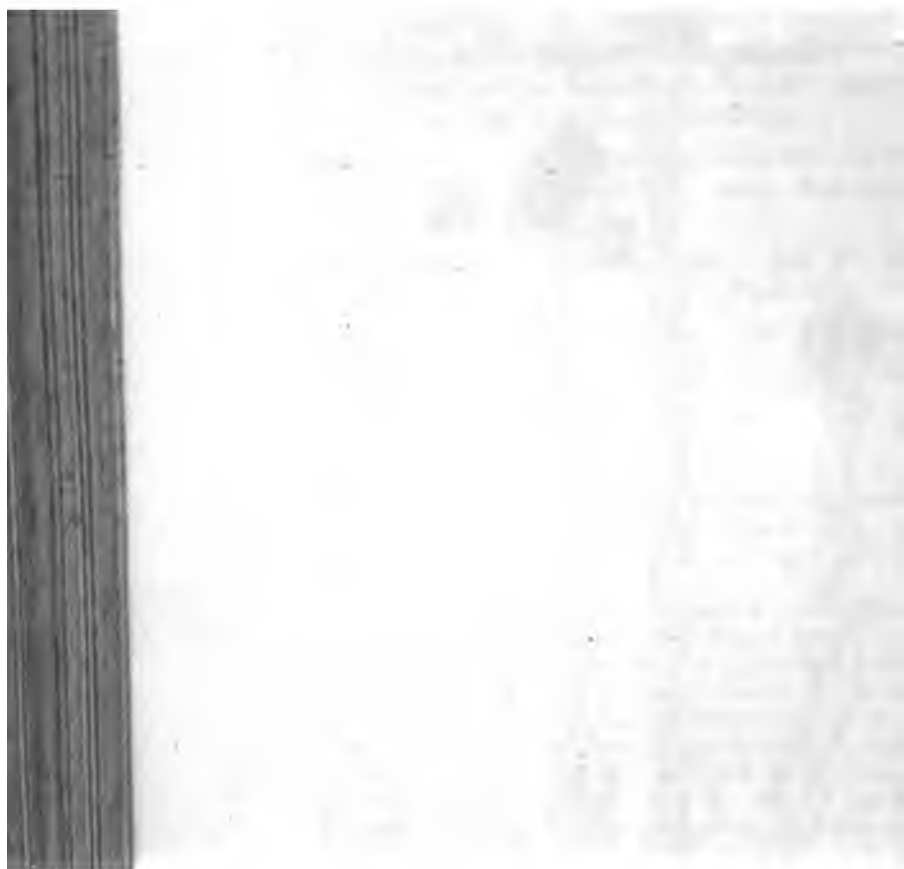
DRY gravelly or sandy fields produce this plant in abundance. Its first flowers appear in June or July, but its repeatedly branching stem bears a succession of fresh ones to the end of autumn.

Root annual, small. Stems at first a span high, erect and simple, leafy and woolly, terminated by a solitary round sessile head of numerous flowers: but two or more branches soon spring from under this head, point upward, flower, and branch in a similar manner, so that the offspring as it were exalting itself above the parent has given occasion to the ingenious name of *Herba impia*, or Wicked Cudweed. Leaves numerous, alternate, erect, lanceolate, waved, woolly on both sides. Flowers spreading in every direction, cylindrical. Calyx-leaves brownish, shining, tapering, smooth, with a green rib. Florets pale yellow; the hermaphrodite only 2 or 3; female several, very slender; both kinds producing perfect seed, crowned by rough down.

The name Cudweed has arisen from a supposed power in this herb to provoke rumination in cattle; and its dry woolly substance, when taken into the throat, is not unlikely to have such an effect.



Utricularia polyandra Ledeb.



[191]

COMPTON'S PATENT

Patented July 1, 1891.

THE COMPTON PATENT

One of the most important of the

inventions of the present day is

the

new Compton's Patent, which is

the most important of the present

and the most important of the

new Compton's Patent, which is

the most important of the present

and the most important of the

new Compton's Patent, which is

CONYZA squarrosa.

*Plowman's Spikenard.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* rough. *Calyx* imbricated, roundish. *Florets* of the radius three-cleft.

SPEC. CHAR. Leaves ovato-lanceolate, downy. Stem herbaceous, corymbose. Calyx-scales leafy, recurved and prominent.

SYN. *Conyza squarrosa*. *Linn. Sp. Pl.* 1205. *Sm. Fl. Brit.* 875. *Huds.* 363. *With.* 717. *Hull.* 183. *Reich.* 325. *Silb.* 251. *Attot.* 180.

Baccharis monspeliensis. *Raii Syn.* 179.

A FREQUENT plant on dry, chalky, limestone, or marly soils, but not on gravel. It often occurs in shady situations,







ERIGERON canadense.

Canada Flea-bane.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Florets* of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stem hairy, panicled. Leaves lanceolate; the lower ones toothed.

SYN. *Erigeron canadense.* *Linn. Sp. Pl.* 1210. *Sm. Fl. Brit.* 876. *Huds.* 363. *With.* 718. *Hull.* 185. *ed.* 2. 240. *Dicks. H. Sicc. fasc.* 10. 16.

Conyza canadensis annua acris alba, linariæ foliis. *Raii Syn.* 175.

FOUND in cultivated as well as waste ground, but Ray thinks it not indigenous, for the reason, we presume, given in our last page concerning the American Cudweed. It is hard to say to what distances such volatile seeds may or may not be transported by natural means. We have not met with this *Erigeron* near London, as indicated by Ray and Hudson. A fresh specimen, drawn in the plate, was sent us from the Ballast hills of the Northumberland coast by Mr. Robson, and a dry one from "sandy ground below the bridge at Neath, Glamorganshire, to all appearance perfectly wild," by Mr. Middleton.

Root annual. Stem erect, wand-like, leafy, hairy, furrowed, branched in a panicled manner, and bearing very numerous small yellowish flowers. It varies from 1 to 2 feet, or more, in height. Leaves numerous, alternate, lanceolate, acute, rough-edged, entire, except the lower ones, which are mostly toothed towards their extremities. Calyx-scales linear-lanceolate, acute, smoothish; at length reflexed. Marginal florets narrow, erect, whitish, tipped with flame-colour; those of the disk white. Seeds white, silky. Down rough, as well as the receptacle.



3

[1158]

ERIGERON acre.

*Blue Flea-bane.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. Florets of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stem racemose. Stalks mostly single-flowered. Leaves lanceolate or tongue-shaped, sessile.

SYN. *Erigeron acre.* *Linn. Sp. Pl.* 1211. *Sm. Fl. Brit.* 877. *Huds.* 363. *Witb.* 718. *Hull.* 185. *Relb.* 325. *Sibth.* 252. *Abbot.* 181. *Curt. Lond. fasc.* 1. t. 60.

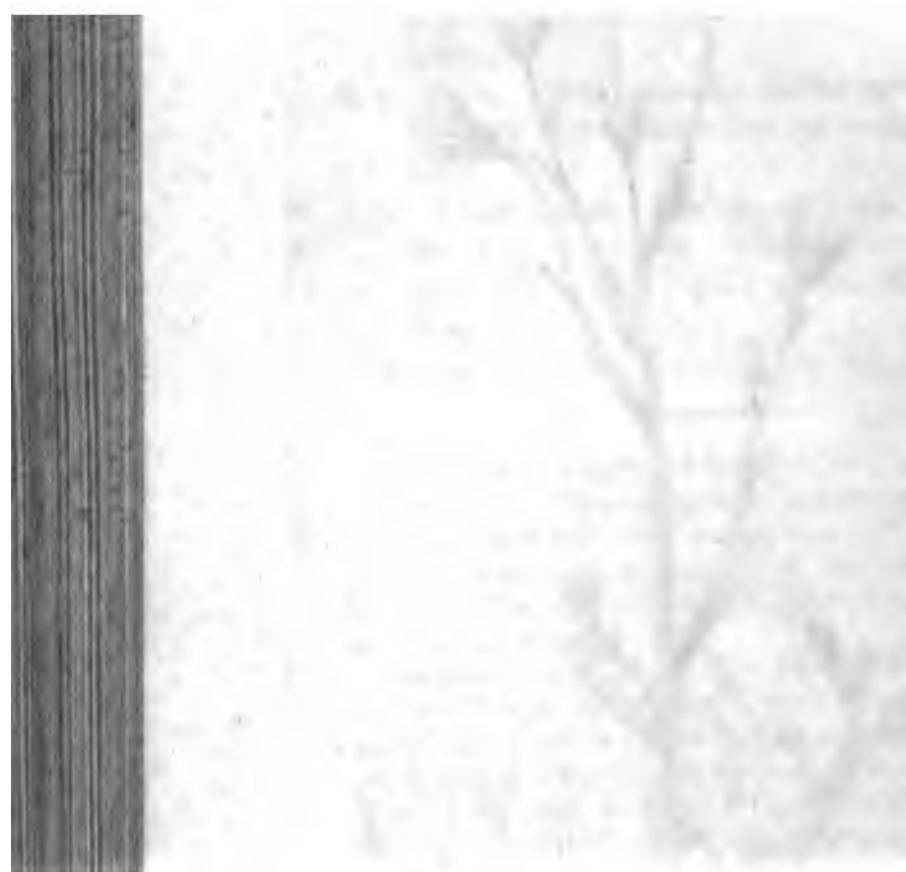
After *arvensis cæruleus acris.* *Raii Syn.* 175.

THIS, like the *Gnaphalium* in our last plate, prefers a barren gravelly soil, but is generally found in more grassy or shady spots, and often upon chalk or limestone. It is biennial, flowering naturally in July and August; but from accidental causes its blossoms may occasionally be met with in early spring, or late in mild winters.

Root woody and branched. Stem a foot or two high, upright and straight, leafy, furrowed, purplish and hairy, producing many flowers in a racemose form in its upper part, on long bracteated stalks. Leaves scattered, sessile, roughish, of an oblong-lanceolate, spatulate, or tongue-like figure, mostly entire; the lowermost obovate and often coarsely serrated. Calyx hairy. Flowers appearing delicately streaked with blue, from the numerous upright linear florets of the radius, which encompass the yellow disk. Seed-down copious, long, rough, of a tawny hue, by which, when once known, the plant is easily recognised. Seeds rough.



Fig. 1. Stachys recta (L.) Link. & Schumacher



ERIGERON alpinum.

*Alpine Flea-bane.*SYNGENESIA *Polygamia-superflua.*GEN. CHAR. *Recept.* naked. *Seed-down* simple. *Florets* of the radius linear, very narrow.

SPEC. CHAR. Stems almost single-flowered. Calyx slightly hairy.

SYN. *Erigeron alpinum.* *Linn. Sp. Pl.* 1211. *Dicks. in Linn. Transf. V.* 2. 288. *With.* 718. *Fl. Dan. t.* 292.

FIRST discovered by Mr. Dickson upon moist rocks of the mountain Ben Lawers in Scotland. Our specimen was sent by Mr. Mackay. It is perennial, and flowers in July.

The root consists of many long simple round fibres. Stems several, erect, leafy, angular and rather hairy, naturally simple, and bearing one or, at most, two flowers; but in a luxuriant soil, or when by accident broken, they shoot out into many single-flowered branches. Leaves spatulate, ribbed, hairy; those on the stem alternate, sessile, and dilated at their base. Flower erect. Calyx of numerous linear upright leaves, slightly hairy, often reddish. Central florets very numerous, tubular, yellowish, hermaphrodite, but with the thickened stigma that according to Dr. Stokes indicates barrenness; a point we have no means of ascertaining. The seeds of these florets however look as if perfect. Florets of the radius numerous, ligulate, very narrow, spreading, pale purple, furnished with a style and slender stigmas, no stamina. Seeds of all the florets hairy. Seed-down turning reddish, and, when very highly magnified, rough. Receptacle naked, marked with minute depressions.

Like most alpine plants, this varies very much in size according to soil and situation. The *E. uniflorum*, if distinct, is to be known from it chiefly by the calyx being woolly, or clothed with long thick-set white hairs.



May 1778. Published by P. Smiley & Co.



ERIGERON uniflorum.

Pale-rayed Mountain Flea-bane.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. *Florets* of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stems mostly single-flowered. Calyx hairy. Florets of the radius erect, somewhat tubular.

SYN. *Erigeron uniflorum.* Linn. *Sp. Pl.* 1211. *Fl. Lapp. ed.* 2. 250. *t.* 9. *f.* 3. *Sm. Tr. of Linn. Soc.* v. 10. 346.

GATHERED on Ben Lawers, as well as on rocks by the river Almond, near Lindoch, seven miles from Perth, by Mr. G. Don, who justly distinguished this species from *E. alpinum*, *t.* 464, with which even Linnaeus at one time confounded it. In root, habit and size these two plants nearly agree, as well as in time of flowering. The stems of both are usually simple and single-flowered, occasionally many-flowered. But the florets of the radius in *uniflorum* are more slender and always upright, of a darker purple about their middle, though more or less white at the tip; those of the disk are tipped with a very dark purple or brown. The calyx is very hairy externally; its inner scales purple, fringed. The disk very rarely varies to a light yellow.



Rep. a. republished by J. H. Lewis & Co.

THE
HISTORICAL CHARTER OF
THE CITY OF LONDON

AS GRANTED BY KING JOHN IN THE FIRST YEAR OF HIS REIGN

IN THE FIRST YEAR OF HIS REIGN
THE KING GRANTED TO THE COUNTESS MARGARET
WIFE OF HENRY FIRST KING OF ENGLAND
BY HER MARRIAGE CONTRACT
THAT SHE SHOULD HAVE ALL THE
TOWNS AND VILLAGES WHICH SHE
HAD IN HER DOWRY
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED

THE HISTORICAL CHARTER OF THE CITY OF LONDON
AS GRANTED BY KING JOHN IN THE FIRST YEAR OF HIS REIGN
IN THE FIRST YEAR OF HIS REIGN
THE KING GRANTED TO THE COUNTESS MARGARET
WIFE OF HENRY FIRST KING OF ENGLAND
BY HER MARRIAGE CONTRACT
THAT SHE SHOULD HAVE ALL THE
TOWNS AND VILLAGES WHICH SHE
HAD IN HER DOWRY
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED
AND THAT SHE SHOULD HAVE
THEIR FREEDOMS AND CUSTOMS
UNTOUCHED

TUSSILAGO Farfara.

*Colts-foot.*SYNGENESIA *Polygemia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* simple. *Calyx*-lobes equal, as long as the disk, somewhat membranous.

SPEC. CHAR. *Stalk* single-flowered, clothed with imbricated scales. *Leaves* heart-shaped, angulated and toothed.

SYN. *Tussilago Farfara*. *Linn. Sp. Pl.* 1214. *Huds. Fl. Ar.* 264. *Willd. Bot. Arr.* 904. *ed. 3. v. 3.* 719. *Roth. Cat.* 314. *Sibth. Or.* 261. *Curt. Lond. Bot.* 2. t. 60.

Tussilago. *Roth Syn.* 173.

COMMON on moist marley and calcareous ground, flowering in March or April, soon after which the leaves appear, and continue through the summer.

Root perennial, creeping horizontally. Stalks erect, simple, leafless, but clothed with lanceolate, imbricated, close-pressed scales. Flowers terminal, solitary, drooping before they expand, then erect, lemon-coloured, not inelegant, being more conspicuous on account of their radiated form than those of many other species. The calyx consists of several simple parallel linear equal scales, accompanied at the base by a few



Helianthus scaberrimus L.

-

1



TUSSILAGO hybrida.
Longer-stalked Butter-bur.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx* scales equal, as long as the disk, somewhat membranous.

SPEC. CHAR. Panicle dense, oblong. Female florets very numerous; hermaphrodite one or two, central, with generally separate antheræ.

SYN. *Tussilago hybrida.* *Linn. Sp. Pl.* 1214. *Huds. Fl. An.* 364. *With. Bot. Arr.* 906. *ed. 3. v. 3.* 721.

Petasites major, floribus pediculis longis insidentibus. *Raii Syn.* 179.

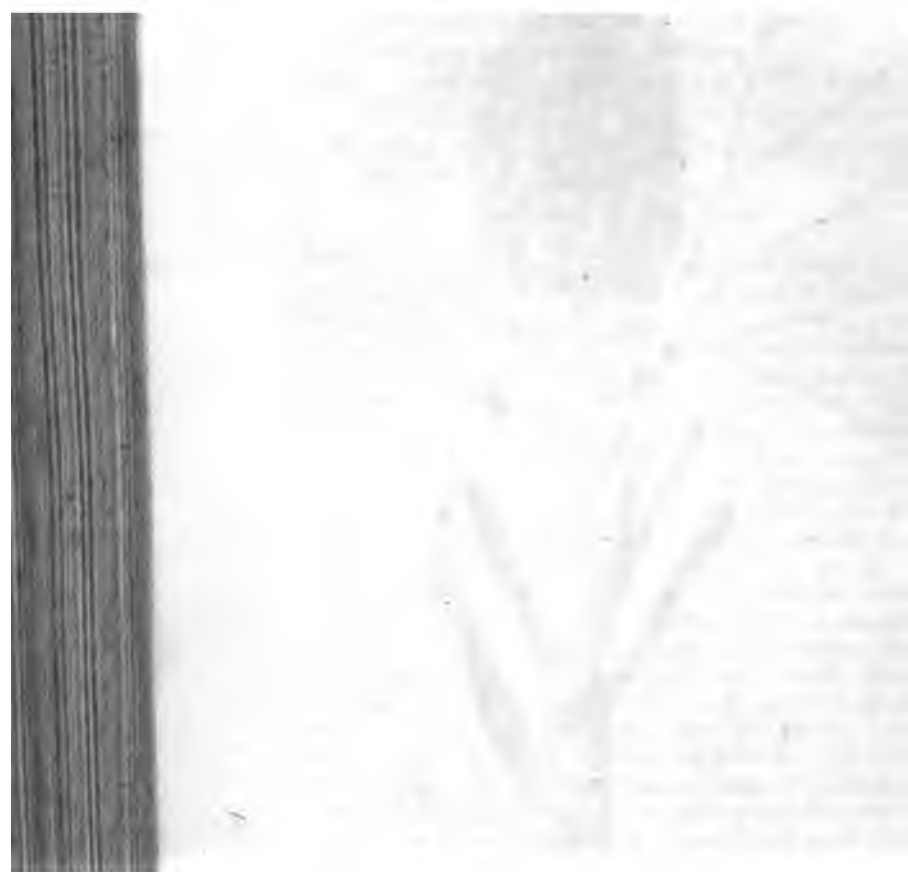
WE are obliged to Mr. Travis of Scarborough for this wild specimen, which was gathered near Thorp Arnold in Leicestershire, on the sides of ditches, where this plant grows intermixed with *T. Petasites*. It is said to be not uncommon in that county, and also to be frequent about Manchester. It is perennial, flowering in April, and the down of the seeds before they are shed, forming a silvery plume, is very ornamental and conspicuous.

Root thick, creeping very far. Leaves radical, heart-shaped, pointed, irregularly toothed, cut away close to the side nerves at the base, very broad, downy beneath, standing on long upright fleshy cottony foot-stalks. Stalk erect, rising above the leaves, simple, round, cottony, invested with lanceolate scales, the lowermost of which mostly terminate in a small leafy appendage. Panicle dense, oblong or nearly ovate at first; after flowering, cylindrical and more loose. Partial flower-stalks mostly a little branched, slender, scaly and downy. Flowers flesh-coloured. Calyx short, nearly smooth, tipped with purple. Florets very numerous, all tubular, and for the most part female. Style much longer than the corolla, cloven, sharp-pointed. Linnæus describes these female florets as naked, or without corolla; but we must confess that in his own specimen as well as ours we can find no floret without. Seed obovate, rarely fertile. Down rough. In the centre among these female florets are found one or two, scarcely more, hermaphrodite ones, which have a reddish and rather more conspicuous corolla. Their antheræ are red, separate, or scarcely at all syngenesious. Their stigma is club-shaped, notched but hardly cloven, much thicker and shorter than in the female florets, and the germen is evidently imperfect.

We are almost persuaded of what nobody has hitherto hinted, that this plant is the true female of *T. Petasites*, being furnished with only a small provision of the other sex to perform its office occasionally, as is the case in *Spinachia*, *Cannabis*, *Musa*, &c. See *T. Petasites* in the next plate.



Senecio jacobinae (L.) DC.



TOMATOES.

Cultivation of the Tomato.

The Tomato is a native of the West Indies.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

The Tomato is a native of the West Indies, and is now cultivated in all the warm countries of the world. It is a very useful vegetable, and is much used in the kitchen.

TUSSILAGO Petasites.

Common Butter-bur.

SYNGENESIA *Polygamia-superflua*.

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx* scales equal, as long as the disk, somewhat membranous.

SPEC. CHAR. Panicle dense, ovate. Flowers almost all hermaphrodite, with united antheræ.

SYN. *Tussilago Petasites*. *Linn. Sp. Pl.* 1215. *Huds. Fl. An.* 364. *With. Bot. Arr.* 906. ed. 3. v. 3. 720. *Relh. Cant.* 314. *Sibth. Ox.* 261. *Curt. Lond. fasc.* 2. t. 59.

Petasites. Raii Syn. 179.

VERY common on the banks of rivers and in moist shady places, flowering in April, about which time also the leaves appear, and in the course of the summer grow to a great size, being 2 or 3 feet in diameter.

The root is perennial, creeping very far, and increasing rapidly, so as to be extirpated with difficulty; in which respect it agrees with *T. hybrida*, as well as in the appearance and form of its leaves, which however are somewhat larger in the *Petasites*. The flower-stalk differs chiefly in being rather shorter, and the panicle after flowering less lengthened out. The flowers are larger, and scales of the calyx twice as long. All the florets are hermaphrodite in appearance; but their stigmas are thick and barren, many authors observing that the seeds are never perfected. The younger Linnæus and Haller, however, have occasionally noted a very few female florets to accompany the others, which the latter tells us produce good seeds. This circumstance is rare, and has not been observed in England; nor, if general, would it invalidate our conjecture, that this is the real male of *T. hybrida*, forming but one species with that. It is worth consideration whether the *T. alba* may not stand in the same relation to the *paradoxa* of Retzius, *Ait. Hort. Kew.* v. 3. 188. The antheræ of *T. Petasites* are united, as in *alba*; in *paradoxa*, as in *hybrida*, they are separate. All these plants increase so much by root, that impregnation (whether in the same individual or not) rarely takes place, which is also the case with mints and many other vegetables. We agree with Dr. Stokes and Professor Sibthorp, that as the florets of the circumference only in this genus produce perfect seeds, the central ones having the thickened stigma which appears always to be barren, it might be removed to the order of *Polygamia-necessaria*; but Syngenesious plants are subject to such variations in the perfection of their organs of impregnation, that it is by no means certain how far that order, or indeed some others, are founded in nature. This point we cannot here discuss, but may on some future occasion.

431.



Asplenium adnigrum L. f. *Asplenium adnigrum* L. f.

S E N E C I O vulgaris.

Common Groundsel.

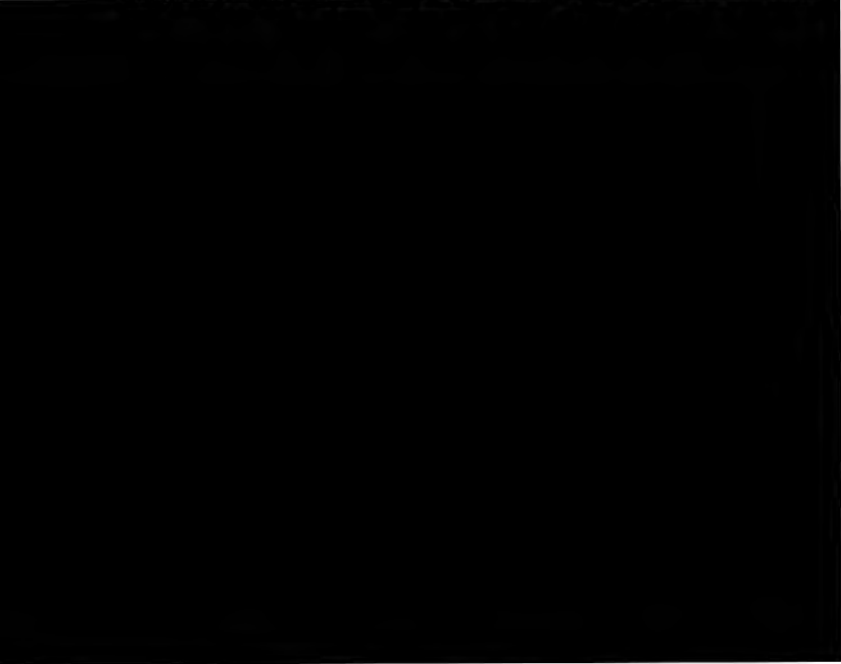
SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Flowers without a radius, scattered. Leaves sinuated in a pinnate form, toothed, embracing the stem.

SYN. *Senecio vulgaris.* *Linn. Sp. Pl.* 1216. *Sm. Fl. Brit.* 881. *Hudsf.* 365. *With.* 721. *Hull.* 186. *Relb.* 315. *Sibth.* 252. *Abbot.* 182. *Curt. Lond. fasc.* 1. t. 61. *Raii Syn.* 178.

EVERY one knows the Common Groundsel, a weed found in all kinds of cultivated ground, as well as on banks by roadsides, and similar places. It is annual, and flowers almost all the year round. The flower-buds and young tops are the food







SENECIO viscosus.

*Stinking Groundsel.**SYNGENESIA Polygamia superflua.*

GEN. CHAR. *Receptacle* naked. *Down* simple. *Calyx* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. *Radius* revolute. Leaves pinnatifid, viscid. Scales of the calyx lax, and nearly as long as the calyx itself, which is hairy.

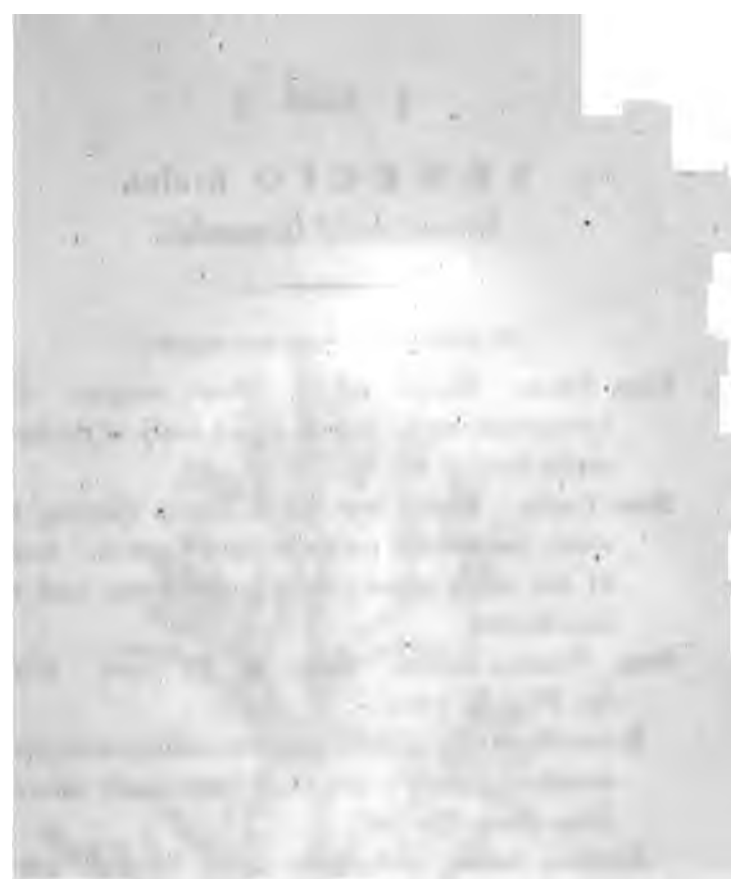
SYN. *Senecio viscosus*. *Lim. Sp. Pl.* 1217. *Willd. Bot. Arr.* 909. *Hudf. Fl. An.* 365. *α.*

Senecio hirsutus viscidus major odoratus. *Raii Syn.* 178.

GATHERED by Dr. Smith about the chalk-pits at Dartford in Kent, flowering in July. The root is annual. The whole plant covered with a fetid viscous liquor which retains small insects, dust and light substances in great abundance. The stem is much branched and straggling, not simple and erect as in *Senecio sylvaticus*. The flowers are in all their parts twice as large as in that plant, but much more scattered, and less numerous, as well as of a brighter gold colour, and the calyx is hairy. All these circumstances surely justify us in considering them as distinct species.



Libanotis deltoidea 1794



S E N E C I O lividus.
Green-scaled Groundsel.

SYNGENESIA *Polygamia superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves clasping the stem, lanceolate, pinnatifid and toothed. Scales of the calyx short; their points acute, and not discoloured.

SYN. *Senecio lividus.* *Linn. Sp. Pl.* 1216. *Willd. Sp. Pl. v. 3.* 1983.

S. corollis revolutis, foliis amplexicaulibus lanceolatis dentatis, squamis calycinis brevissimis intactis.
Linn. Hort. Ups. 261.

Jacobæa annua, senecionis folio, fœniculi odore.
Till. Pis. 86. *t.* 28. *f.* 2.

THIS new British plant was discovered in October, 1812, by W. Middleton, Esq., on some newly enclosed moor land at Sneaton, near Whitby, Yorkshire, and no one can withhold from its finder the praise of great accuracy of observation. Its appearance is most like *S. sylvaticus*, *t.* 748, but the essential and all-sufficient marks of distinction are the dilated base of the leaves, which embraces the stem, and the taper-pointed scales at the base of the calyx, which are not blackened and abrupt at the tip, as in perhaps every other *Senecio*; so that it in some measure wanders from the generic character. By the Linnæan herbarium we find this species varying very much in the depth of the segments of its leaves. Mr. Middleton observes that the florets of the radius are not at first revolute, but gradually become so. The seeds of this plant, as well as of *S. squalidus*, *t.* 600, were sent to Linnæus by Dillenius. An Italian specimen, from Arduino, helps us to the synonym of Tilli.





SENECIO *sylvaticus*.*Mountain Groundsel.*SYNGENESIA *Polygamia-superflua*.

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius revolute. Leaves pinnatifid, lobed, toothed. Scales of the calyx short. Stem erect, straight, corymbose.

SYN. *Senecio sylvaticus*. *Linn. Sp. Pl.* 1217. *Sm. Fl. Brit.* 883. *With.* 722. *Hull.* 186. *Sibth.* 253. *Abbot.* 182.

S. viscosus β. *Huds.* 365.

S. minor latiore folio, five montanus. *Dill. in Rar. Syn.* 198.

MR. HUDSON was almost singular in the opinion that this plant was a variety of the *S. viscosus* of Linnæus, delineated in our first vol. t. 32, to which we see no reason to assent. That species has a branched spreading stem about a foot high; flowers less corymbose, twice or thrice as large as these, with a much more conspicuous radius, and the calyx-scales nearly equal to the calyx itself; this on the contrary has a straight upright wand-like stem, about 3 feet high; upper leaves more finely divided; flowers corymbose, numerous, much smaller and paler, with a short small recurved radius, and the calyx-scales small and short as in most of the genus; the herb, though almost equally unpleasant in its scent, is however much less viscid.

S. sylvaticus is annual, and flowers in July. It loves a gravelly or sandy soil, and is found in bushy spots upon heaths, where trees or furze have been cut down; especially where brakes or other plants have been burnt in the preceding autumn.







SENECIO squalidus.

*Inelegant Ragwort.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading, longer than the calyx; its florets elliptical and entire. Leaves pinnatifid; their segments distant, somewhat linear.

SYN. Senecio squalidus. *Linn. Sp. Pl.* 1218. *Hort. Ups.* 260.

THIS *Senecio* grows abundantly on almost every wall in and about Oxford, and though long since noticed there by Sir Joseph Banks, it has not found its way into the *Flora Oxoniensis*, nor hitherto into any other. A careful comparison with the herbarium of Linnæus shews it to be his *squalidus*, seeds of which he received from Dillenius with a manuscript name of *Jacobæa laciniatis foliis, tanaceti odore*, before the publication of his *Hort. Upsaliensis*, in which work he guesses it to be a native of the South of Europe. Most probably Dillenius collected these seeds from the walls of Oxford. If it were at that time only a garden plant there, it could scarcely have now to-



June 1, 1909. Liliaceae by J. L. Gentry.



SENECIO tenuifolius.

*Hoary Groundsel.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading. Leaves pinnatifid, somewhat revolute; paler and shaggy beneath. Stem erect, cottony.

SYN. *Senecio tenuifolius.* *With.* 723. *Jacq. Austr.* t. 278. *Syn. Syn.* 181. *Sibth.* 253.

S. crucifolius. *Huds.* 366. *Relb.* 316. *Abbot.* 182. *Curt. Lond. falc.* 5. t. 64.

Jacobaea Senecionis folio incano perennis. *Raii Syn.* 177.

SENT from Holm near the sea, Norfolk, by the Rev. Mr. Sutton. No plant is more variable in the appearance of its foliage. On a calcareous soil, its favourite situation, the leaves are very much revolute, and quite white beneath with a thick cottony web, of which the stem always more or less partakes; in damp shady places they are almost flat, and green, though always paler and somewhat shaggy, on the under side. Such are the extremes of the two varieties marked by Dr. Withering,



SENECIO *Jacobæa*.
Common Ragwort.

SYNGENESIA *Polygamia-superflua*.

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading. Leaves doubly pinnatifid, somewhat lyrate, divaricated, toothed, smooth. Stem erect.

SYN. *Senecio Jacobæa*. *Linn. Sp. Pl.* 1219. *Sm. Fl. Brit.* 885. *Huds.* 365. *With.* 724. *Hull.* 187. *Relb.* 328. *Sibth.* 254. *Abbot.* 182. *Murt. Ryft.* i. 85.

Jacobæa vulgaris. *Raii Syn.* 177.

ABUNDANT every where in dry pastures, waste ground, and by road sides, flowering copiously in the usual hot weather of July and August, at which time it forms a contrast with the surrounding scorched and withered herbage.

Root perennial. Stem erect, furrowed, very leafy, branched in a corymbose manner. Leaves alternate, deep shining green, doubly pinnatifid, or cut into various spreading, wedge-shaped



Fig. 1. 1893. Published by J. & S. Sowerby London



[1131]

SENECIO aquaticus.

*Marsh Ragwort.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. Radius spreading; florets elliptical. Leaves lyrate, serrated; the lowermost obovate and undivided. Seeds smooth.

SYN. *Senecio aquaticus.* *Huds.* 366. *Sm. Fl. Brit.* 885. *Wub.* 725. *Hull.* 187. *Relb.* 329. *Sibth.* 254. *Decol.* 182.

Jacobaea latifolia palustris five *aquatica.* *Raii Syn.* 178.

EQUALLY common with the preceding, but in different situations: preferring moist meadows and even ditches, where it flowers from July to the end of autumn, and the root is perennial.

Linnaeus considered this but as a variety of *S. Jacobaea*, and indeed its leaves are subject to so many changes of form, from ovate to deeply pinnatifid, that they sometimes approach





[650]

SENECIO paludosus.

*Marsh Groundsel. Bird's-tongue.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, scaly at the base; scales dead at the tip.

SPEC. CHAR. *Radius* spreading. *Leaves* sword-shaped, sharply serrated, somewhat woolly beneath. *Stem* perfectly straight.

SYN. *Senecio paludosus.* *Linn. Sp. Pl.* 1220. *Huds.* 366. *With.* 725. *Hull.* 187. *Relb.* 317.

Virgæ aureæ five *Solidagini angustifoliæ* affinis, *Lingua avis Dalechampii.* *Raii Syn.* 176.

NO plant more rare than the present has hitherto appeared in our work. Mr. Hudson admitted it on the authority of Ray; but the place of growth he mentions, near Streatham ferry in the Isle of Ely, has many a time been searched in vain, so that most botanists have supposed something else had been mistaken for it. Mr. Relhan however mentions Littleport, Chatteris, and Burwell fens as its stations; and our specimen was found at Wangford near Brandon, by Francis Eagle jun. Esq. and communicated by the Rev. Mr. Hemsted. It grows in deep inaccessible fens and ditches, flowering in June and July.

Root of many long simple fibres, perennial. Stem from three to six feet or more in height, perfectly straight, upright and simple, leafy, round, hollow, striated, loosely clothed with cottony down, which likewise invests the young leaves and flower-stalks. Leaves scattered, numerous, sessile, lanceolate, acute, sharply serrated; narrow and entire at the base; smooth above; pale, and generally downy, beneath. Flowers in a kind of terminal corymbus, the lowermost stalks arising from the bosoms of the upper leaves. Bractææ awl-shaped. Flowers above an inch in diameter, bright-yellow. Florets of the radius linear, five-toothed, spreading, but little recurved. Receptacle set with short hairs between the seeds, as is often the case in many plants in which that part is said to be naked, for these hairs are very different from the long chaffy scales to be found in some genera. The seed-down is rough.

0350



Drawn 1899, Published by J. E. S. S. S. S.



S E N E C I O saracenicus.

*Broad-leaved Groundsel.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* cylindrical, many-leaved, equal, scaly at the base; scales dead at the tip.

SPEC. CHAR. *Radius* spreading. *Flowers* corymbose. *Leaves* lanceolate, serrated, nearly smooth.

SYN. *Senecio saracenicus.* *Linn. Sp. Pl.* 1221. *Sm. Fl. Brit.* 887. *Huds.* 367. *With.* 726. *Hall. ed. 2.* 242. *Jacq. Austr. v. 2.* 52. *t.* 186.

Virga aurea maxima, radice repente. *Raii Syn.* 177.

MR. JOHN WINDSOR, an assiduous young botanist, favoured us with this wild specimen in July 1810 from the neighbourhood of Settle, Yorkshire. The Rev. John Rudd, F.L.S., of Preston, sent others in August from Brawsholme, 19 miles from the town last named. Mr. Okell has observed the same near Chester, and we have gathered it long since in a watery lane near Preston hall, between Kirkby Lonsdale and Kendal. This is one of our rarest British plants. The specific name alludes to its being used by the Saracens as a vulnerary. Its qualities are astringent, with considerable acrimony.

The root is perennial and creeping. Stems annual, erect, straight, from 3 to 5 feet high, leafy, angular, scarcely branched, smooth, or but slightly downy. Leaves alternate, sessile, lanceolate or oblong, acute, a span long, more or less, with numerous, sharp, tooth-like serratures. Flowers bright yellow, in a large terminal corymbus, with narrow, lanceolate, pointed bracteas, and rather downy stalks. Calyx also somewhat downy, its supplementary scales lanceolate. Florets of the radius long and somewhat elliptical, scarcely toothed at the end, with longish claws, not numerous, revolute in decay only. Seeds nearly, if not quite, smooth, with a roughish down.

252
Ruellia



Illustrated by J. C. Smith





A S T E R Tripolium.

Sea Star-wort.

SYNGENESIA Polygamia Superflua.

GEN. CHAR. *Receptacle* naked. *Seed-down* simple.
Cor. with more than ten rays. *Cal.* imbricated,
its lowermost scales spreading.

SPEC. CHAR. Leaves linear-lanceolate, entire, fleshy,
smooth, obscurely three-nerved. Scales of the
calyx somewhat membranous and obtuse. Flowers
corymbose.

SYN. After Tripolium. *Lim. Sp. Pl.* 1226. *Hudf.*
Fl. An. 368. *Ait. Hort. Kew.* v. 3. 199. *With.*
Bot. Arr. 915. *Relb. Cant.* 318.

A. maritimus caeruleus, Tripolium dictus. *Ram.*
Syn. 175.

A NATIVE of muddy sea-shores and mouths of rivers in every part of our coast, gathered on Woldham marsh by Lord Viscount Lewisham Aug. 29.

Root perennial, with long fibres. Stems from six inches to three feet high, leafy, branched, and producing abundance of flowers, which are not unornamental. Sometimes these flowers are perfectly destitute of rays, as found at Purfleet by Mr. T. F. Forster, junior, and at Lynn by Dr. Smith.—See the annexed specimen. The rays, when present, as is commonly the case, are generally of a delicate pale purple; sometimes they are white.

Dr. Stokes has observed this plant in *inland* salt-marshes, and therefore supposes, with great probability, its presence may be an indication of salt springs.



1

1

1

1

1

THE JOURNAL OF THE

AMERICAN MEDICAL ASSOCIATION

CHICAGO, ILL., MAY 1, 1913

DEAR SIR: Please find enclosed for your information

a copy of the report of the committee on the

subject of the proposed amendment to the

constitution of the American Medical Association.

The committee has the honor to acknowledge

the receipt of your letter of the 28th inst.

and is pleased to hear that you are

interested in the subject.

Very respectfully,
 J. H. HARRIS, Secretary.

Enclosed for you are also the following:

1. A copy of the report of the committee on the

subject of the proposed amendment to the

constitution of the American Medical Association.

SOLIDAGO Virgaurea.

*Common Golden-rod.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Down* simple. *Ligulate florets* about 5. *Calyx-scales* imbricated, closed.

SPEC. CHAR. Stem slightly zigzag, angular. Flower-clusters paniced, upright, crowded.

SYN. *Solidago Virgaurea.* Linn. *Sp. Pl.* 1235. *Huds. Fl. An.* 367. *With. Bot. Arr.* 917. *Relh. Cant.* 318. *Sibth. Ox.* 254.

Virga aurea. *Raii Syn.* 176.

IN woods, copses, and among furze upon heathy ground not unfrequent, flowering from July to September.

Root perennial, of long simple fibres. Stem very various in height, from 10 inches to 3 feet, curved below, then erect, leafy, very slightly zigzag, angular and striated, rough, a little downy. Leaves harsh, clothed with short rigid down, paler beneath, on winged footstalks; the radical ones obovate, or at least very broadly lanceolate, serrated, or rather crenate; those on the stem alternate, narrower and more entire. Flowers yellow, in terminal and axillary erect clusters, forming a dense panicle, which varies extremely as to luxuriance and number of flowers. Bractæ lanceolate, downy. Calyx-scales with a membranous border, downy. Rays of the flower from 5 to 9 or 10. Seed-down rough when magnified. The herb bruised smells like wild carrot. It has been esteemed a vulnerary, and is recommended to be taken internally as well as applied to the wound. As a tonic it may strengthen the general habit of body, and by that means be of use.

Some botanists have suspected our Golden-rod to be different from the *S. Virgaurea* of Linnæus, but on a careful comparison of specimens we find them precisely the same.



[1546]

INULA Helenium.

*Elecampane.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the radius very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, ovate, rugged, downy beneath. Scales of the calyx ovate.

SYN. *Inula Helenium.* *Linn. Sp. Pl.* 1236. *Sm. Fl. Brit.* 891. *Huds.* 368. *With.* 730. *Hull.* 185. *Relh.* 330. *Sibth.* 255. *Abbot.* 183. *Woodw. Med. Bot. t.* 108.

Helenium. *Raii Syn.* 176.

THE wild specimen figured in our plate was gathered at Limpenhoe, Norfolk, by the Rev. George Reading Leathers, F. L. S. in the latter end of August. The Elecampane grows in moist rich pastures and meadows in several parts of England, but is not common. In gardens it used to be more cultivated than at present, for the sake of its root, which is perennial, large and fleshy, abounding with mucilage, combined with an aromatic bitter flavour, and some acrimony. These qualities render it useful to promote expectoration. In Germany it is said to be frequently candied, and taken as a stomachic.

The stems are a yard high or more, thick, furrowed, leafy, downy, branched above. Leaves large, ovate, slightly serrated, veiny, most downy and white beneath; the radical ones on stalks; the rest clasping the stem. Flowers large, terminal, solitary, of a fine golden yellow. Calyx-scales broad, leafy, veiny, entire; the inner ones narrow. Radius composed of a multitude of linear spreading florets; the disk of still more numerous tubular ones. Seeds quadrangular, smooth. Down roughish. Receptacle not quite smooth.



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

■ ■



Helianthus, published by J. G. Smith, London.









Jan 2 1868 Published by J. S. Sowerby, London

[1196]

INULA pulicaria.

*Small Fleabane.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the disk very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, waved. Stem much branched, hairy. Flowers hemispherical, with a very short radius.

SYN. *Inula pulicaria.* *Linn. Sp. Pl.* 1238. *Sm. Fl. Brit.* 892. *Huds.* 369. *Relh.* 331. *Abbot.* 184. *Curt. Lond. fasc. 3. t. 57.* *Dicks. H. Sicc. fasc. 7. 13.*

I. uliginosa. *Sibth.* 256.

I. cylindrica. *With.* 731. *Hull.* 185.

Conyza minor. *Raii Syn.* 174.

FOUND, not unfrequently, on moist sandy heaths and commons, where water has stagnated during winter. It is an annual plant, flowering late in autumn.

We have sought in vain for any solid differences between this and *I. pulicaria* of the Linnæan herbarium, notwithstanding the opinions of Dr. Withering and Dr. Sibthorp. The root is tapering and branched. Stem generally erect, but often spreading or decumbent, branched, many-flowered, zigzag, angular, hairy, and leafy. Leaves slightly embracing the stem, lanceolate or oblong, waved, recurved, entire or very slightly toothed, hairy on both sides. Flowers solitary at the end of each branch, soon overtopped by other branches, erect, hemispherical, of a dull pale yellow. Calyx of numerous, linear, nearly equal, hairy scales. Florets of the radius mostly numerous, but very short, reaching very little beyond the calyx, recurved, and 3-toothed. Receptacle tuberculated. Seeds rough, crowned with a few rough rigid bristles, with a few short scales surrounding them.

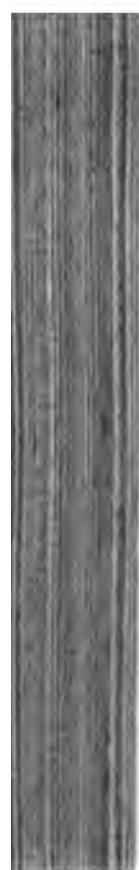




Fig. 1. Plant Published by J. L. Smith, London.

I N U L A crithmoides.

Sampfire-leaved Fleabane.

SYNGENESIA Polygamia superflua.

GEN. CHAR. *Receptacle* naked. *Seed-down* simple. *Antheræ* terminated by two bristles at the base.

SPEC. CHAR. Leaves linear, fleshy, generally three-pointed.

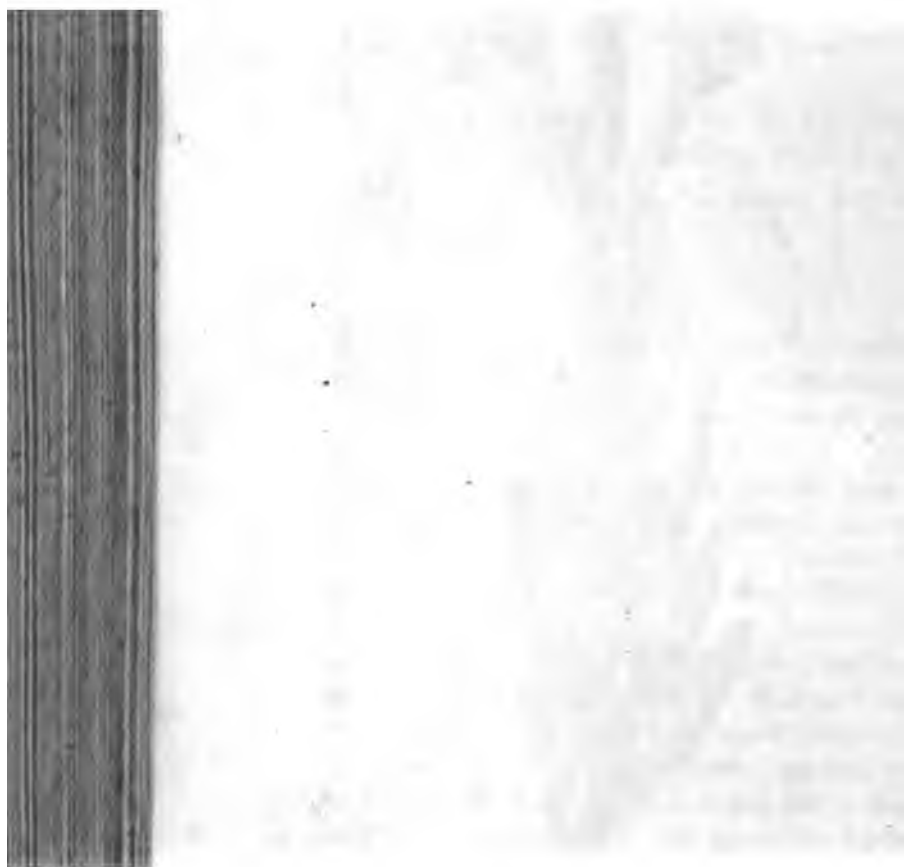
SYN. *Inula crithmoides.* *Linn. Sp. Pl.* 1240. *Huds. Fl. An.* 369. *I. crithmifolia.* *Witb. Bot. Arr.* 924.

Aster maritimus flavus, *Crithmum chrysanthemum dictus.* *Raii Syn.* 174.

THIS is one of those maritime plants which prefer a muddy soil, and is therefore not common. The Reverend Mr. Baker favoured us with this specimen from Portland island, near the light-houses. It flowers in August.

The root is perennial, creeping, and its long fibres run down deep into the mud. Leaves alternate, smooth, very succulent, and salt to the taste; the lowermost blunt and entire; the others generally having a tooth on each side the tip, though many of the upper leaves are often quite entire. The flower-stalks, clothed with narrow bristly bractæ, and swelling upwards, terminate the branches; and each bears a solitary erect flower, of a beautiful appearance, having yellow rays and an orange disk. Mr. Woodward well observes that the down of the seed is finely dentated. Indeed that part is scarcely quite *simple* in any flower, only in some genera the teeth are much longer than in others, so that the down becomes compound or plumose.

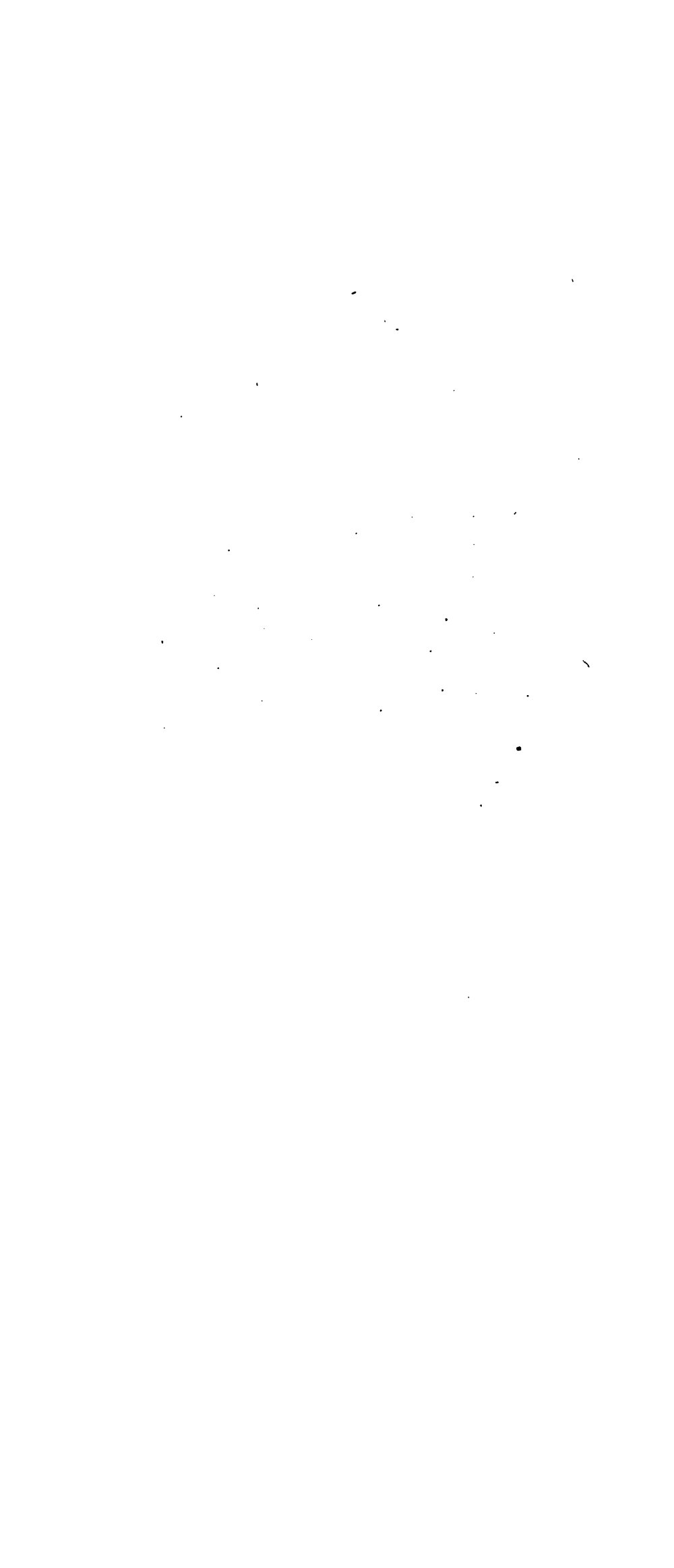
We do not know that this plant is applied to any use. It probably would afford an alkaline salt, like most other succulent sea plants. It is remarkable that such vegetables generally retain their salt taste, even when cultivated far from the sea.



08.







CINERARIA palustris.

Marsh Flea-wort.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Receptacle* naked. *Seed-down* simple. *Cal.* simple, of many equal scales.

SPEC. CHAR. Flowers corymbose. Leaves broadly lanceolate, dentated or sinuated. Stem shaggy.

SYN. *Cineraria palustris.* *Linn. Sp. Pl.* 1243. *Huds. Fl. Ar.* 369. *Wib. Bot. Arr.* 919. *Relb. Cant.* 320.

Coryza foliis laciniatis. *Rau Syn.* 174.

THIS, though by no means a common plant, is found in marshy places and wet marshy places in the fens. Mr. Woodward discovered as well this specimen in the middle of June last from near Haverhill in Norfolk: it grows also on St. Faith's Newton.



Helianthus scaberrimus

CINERARIA integrifolia.

*Mountain Flea-wort.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Cal.* simple, of many equal scales.

SPEC. CHAR. Leaves oblong, obsoletely denticulated, shaggy. Flowers in a simple involucreted umbel.

SYN. *Cineraria integrifolia.* *With. Bot. Arr.* 920. *Murr. Syst. ed.* 14. (*β pratenfis*) 765. *Jacq. Fl. Austr. t.* 180.

C. alpina. *Huds. Fl. An.* 370. *Relb. Cant.* 320. *tab. Linn. Sp. Pl.* (var. *ν*) 1243.

Jacobæa Pannonica folio non laciniato. *Raii Syn.* 178.

GATHERED by the Rev. Mr. Hemsted on Gogmagog hills and Newmarket heath, where, as on many other chalky downs of England, this plant is to be found flowering in May and June.

Root long and thready, perennial. Radical leaves numerous, spreading on the ground, ovate, spatulate, or obovate occasionally, generally lengthened out at the base, reflexed and denticulated in the margin, clothed with loose shaggy wool: those on the stem differ in being narrower, and alternate. Stem from six to twelve inches high, erect, simple, furrowed, woolly, bearing a few pedunculated flowers in a simple umbel, with an involucre of a few lanceolate, pointed, almost naked, leaves. The scales of the calyx are nearly naked, and have a membranous margin. Seeds hairy. Down simple, roughish. The florets of the radius are generally broadest in the middle, or nearly oval.

Cineraria alpina *α* *Linn. Sp. Pl.* is *Senecio alpinus* of the *Suppl. p.* 371, a very different plant, whose history in the last mentioned place is terribly confused, No. 67 of Haller being *Senecio Doronicum*, and No. 68 our *Cineraria integrifolia*. No. 63 of Haller is (according to Mr. Davall) its true synonym.

Our plant never approaches the appearance of *C. integrifolia* *α*, *alpina*, *Murr. & Jacq. t.* 179, nor can we suppose that variety to belong to any thing else than Jacquin's *C. longifolia*, *t.* 181.





DORONICUM Pardalianches.

*Great Leopard's-bane.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx-scales* in 2 rows, equal, longer than the disk. *Seeds* of the radius beardless.

SPEC. CHAR. Leaves heart-shaped, denticulate; the radical ones on foot-stalks; the rest embracing the stem.

SYN. *Doronicum Pardalianches.* *Linn. Sp. Pl.* 1247. *Lightf.* 485. *Huds.* 650. *With.* 732. *Hull.* 185. *Scop. Carn.* v. 2. 174.

MR. LIGHTFOOT observed this plant in several places in the Lowlands of Scotland, but always near houses, so that he suspected it to be only a naturalized species. Dr. Withering mentions it as growing on the banks of the Severn, below Bridgenorth, and in some other places. Our specimen was gathered by the road side near Saling-hall, Essex, by T. Walford, Esq. who believes it certainly never to have been planted there. Yet if truly indigenous, so conspicuous a plant would surely not have escaped the notice of Ray and his correspondents.

It is perennial, and flowers in May. The crown of the root is woolly. Stem two or three feet high, branched, furrowed, hairy, the uppermost hairs glandular. Leaves more or less hairy, soft and pliable, irregularly and slightly toothed, veiny; the radical ones large, heart-shaped, on long footstalks; the stem-leaves more ovate, sessile. Flowers large, solitary at the end of each branch. The calyx and receptacle both conical; the scales or leaves of the former numerous, linear, in two rows, all equal, much longer than the disk of the flower, and indeed almost as long as the radius, which consists of nearly an equal number of linear pale-yellow female florets, striped externally with green, and notched at the tip. Their seeds have no wing or down; while those of the tubular florets in the disk are crowned with long rough bristles. Scopoli, from whom the excellent description in Lightfoot is almost entirely taken, observes, that it requires only a month to form and ripen the seeds.

The root has been supposed a poison to beasts of prey, but its qualities are very problematical.



DORONICUM Pardalianches.

*Great Leopard's-bane.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Down* simple. *Calyx*-*scales* in 2 rows, equal, longer than the disk. *Seeds* of the radius beardless.

SPEC. CHAR. Leaves heart-shaped, denticulate; the radical ones on foot-stalks; the rest embracing the stem.

SYN. *Doronicum Pardalianches.* *Linn. Sp. Pl.* 1247. *Lightf.* 485. *Huds.* 650. *Witb.* 732. *Hull.* 185. *Scop. Carn. v.* 2. 174.

MR. LIGHTFOOT observed this plant in several places in the Lowlands of Scotland, but always near houses, so that he suspected it to be only a naturalized species. Dr. Withering mentions it as growing on the banks of the Severn, below Brighthelm, and in some other places. Our specimen was gathered by the road side near Saling-hall, Essex, by T. Walford, Esq. who believes it certainly never to have been planted there. Yet if truly indigenous, so conspicuous a plant would surely not have escaped the notice of Ray and his correspondents. It is perennial, and flowers in May. The crown of the root



Aug 16. 1850. *Helianthus* *altissimus* L.

BELLIS perennis.
Common Daisy.

SYNGENESIA. Polygamia-superflua.

GEN. CHAR. Receptacle naked, conical. Down none.

Cal. hemispherical; its scales equal. Seeds obovate.

SPEC. CHAR. Root creeping. Stalk naked.

SYN. Bellis perennis. Linn. Sp. Pl. 1248. Huds. Fl. An. 370. With. Bot. Arr. ed. 3. 733. Rth. Cant. 320. Sibth. Ox. 256. Curt. Lond. fasc. 1. t. 62.

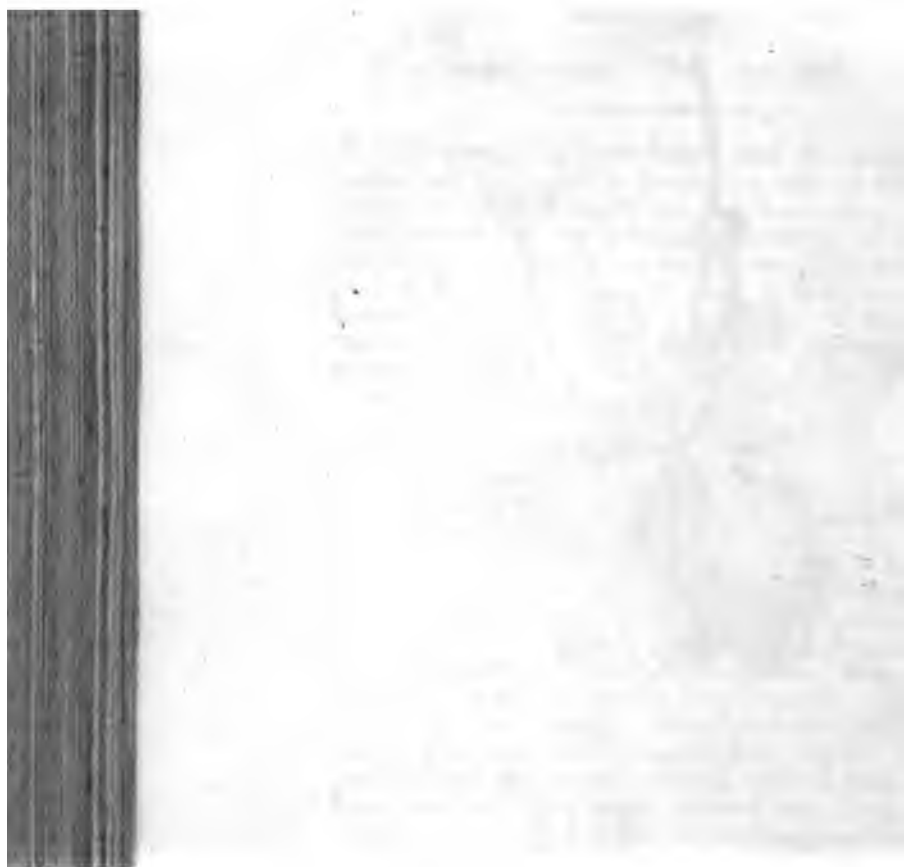
B. sylvestris minor. Raii. Syn. 184.

FEW plants are better known than the daisy. Every pasture and grass-plot is bespangled with its flowers from the beginning of spring till the end of autumn; and if any mild weather happens to break the severity of winter, the daisy is sure to welcome the appearance of the sun, and expand itself to his beams. At night it always closes, and hence its English name, day's-eye or eye of the day. See the apt quotations from Chaucer in the *Flora Londinensis*, where also we are informed that this common plant is not eaten by sheep or horses, nor willingly by cows.

The root is strong, perennial, branched and creeping, throwing out long straight fibres, and producing at its crown several tufts of leaves spreading in a star-like form upon the ground, which are obovate, blunt, crenate, slightly hairy, and all mostly radical, one or two of them only being very rarely borne upon the bases of the stalks in a luxuriant state. Stalks generally upright, single-flowered, round, hairy, naked. Flowers various in size, inodorous. Calyx dark green, hairy, spreading. Radius of several spreading linear or somewhat elliptical female florets, with a notch at the tips, of a polished white, mostly tinged with beautiful crimson at the extremity, especially underneath. Disk of many tubular yellow hermaphrodite florets. Receptacle very conical, and hollow, dotted, without scales or hairs. Seeds obovate, compressed, without any wing or down. Stigma cloven; that of the hermaphrodite florets thicker than in the others.

In gardens the daisy is cultivated with double flowers, that is, composed entirely of the ligulate female florets, and either white, red, or speckled. Sometimes the calyx is proliferous at its base, when it is called the hen-and-chicken daisy.







Sp. 1797. Bot. 1797. P. 1. 1797. 1797.

CHRYSANTHEMUM leucanthemum,
Great White Ox-eye.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Seed* bordered. *Cal.* hemispherical, imbricated; scales membranous at the edge,

SPEC. CHAR. Leaves embracing the stem, oblong, blunt, cut; pinnatifid at the base: the radical ones on foot-stalks, obovate.

SYN. *Chrysanthemum leucanthemum.* *Linn. Sp. Pl.* 1251. *Huds.* 371. *With.* 733. *Hull.* 184. *Relb.* 321. *Sibth.* 257. *Abbot.* 185. *Curt. Lond. fasc.* 5. t. 62. *Mart. Fl. Ruß.* t. 109.

Leucanthemum vulgare. *Raii Syn.* 184.

EXTREMELY common in pastures, the borders of fields, and even among corn, flowering in June and July. It is perennial, and increases much by seed. We do not find it complained of as a troublesome weed, nor celebrated for any agricultural utility. As a medicine it has been used for an expectorant and diuretic; but appears to be inferior to many other plants. Its taste and smell are slightly aromatic, with a nauseous herbaceous sweetness.

The roots are fibrous, branched, tough and woody. Stem erect, 2 feet high, a little branched, round, furrowed, with intermediate ribs. Radical and lower stem-leaves on long foot-stalks, obovate, serrated, and cut: the rest sessile, embracing the stem, alternate, oblong, jagged irregularly in the upper part, toothed in a pinnate manner about the base. All the leaves are nearly smooth and of a deep green. A large solitary handsome flower terminates each branch, the disk of which is flat and yellow, the radius pure white, the florets of each being very numerous; those of the radius are elliptical, with 2 and 3 teeth. The receptacle is flat, and destitute of scales. Seeds obovate, black, with white elevated ribs.

11

12

13

14



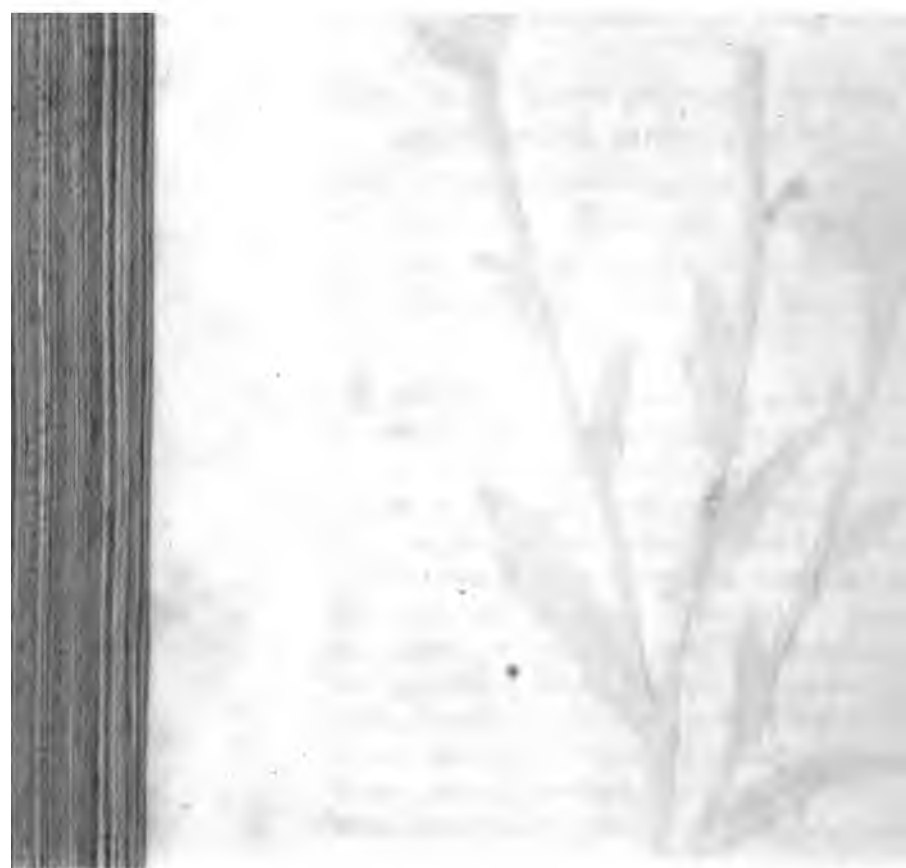
Leucanthemum vulgare L.



540.



Printed by J. Smith, London.



540.



Helianthus scaberrimus L.

PYRETHRUM Parthenium.

*Common Feverfew.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves compound, flat, on foot-stalks; leaflets ovate, cut. Flower-stalks branched, corymbose. Stem erect.

SYN. *Pyrethrum Parthenium.* *Sm. Fl. Brit.* 900. *Relh.* 334.

Matricaria Parthenium. *Linn. Sp. Pl.* 1255. *Huds.* 371. *With.* 735. *Hull.* 184. *Sibth.* 258. *Abbot.* 185. *Woodv. Suppl.* t. 249.

Matricaria. *Raii Syn.* 187.

FREQUENT in waste ground and about hedges, flowering in June and July. Deserted gardens in towns are soon overrun with it. The root is perennial, but seems to bear flowers the first year of its growth.

The stem is erect, branched, furrowed, leafy. Leaves on foot-stalks, simply or doubly pinnated, lobed and cut; their segments more or less ovate, decurrent, of a dull palish green, somewhat hoary. Flowers on long, simple or branched, angular stalks, which are thicker towards their summit, and form a sort of terminal corymbus. Calyx hemispherical or flattish, downy. Disk yellow. Radius short, white, sometimes wanting; its florets approaching to the roundish figure of those of the *Achilleæ*. Seeds furrowed, crowned with a small membrane, which some authors have overlooked. Receptacle naked, flattish. The flowers are often double; that is, the yellow florets of the disk all become ligulate and white like those of the radius.

Feverfew ranks with the plants in our two preceding plates as an aromatic bitter and tonic, and is reported to be particularly useful in hysteric disorders. Its english name seems to imply a febrifuge quality.

[1231]

PYRETHRUM Parthenium.

*Common Feverfew.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves compound, flat, on foot-stalks; leaflets ovate, conc. Flower-stalks branched, corymbose. Stem erect.

SYN. *Pyrethrum Parthenium*. Sm. *Fl. Brit.* 900. *Edin.* 554.

Matricaria Parthenium. Linn. *Sp. Pl.* 1255. *Hede.* 571. *Willd.* 55. *Ham.* 154. *Schreb.* 258. *Attol.* 185. *W. & A.* 243.

Matricaria. Lam. *Sylv.* 157.

FREQUENT in waste ground and about hedges, flowering in June and July. Desolated gardens in towns are soon overrun with it. The root is perennial, but seems to bear flowers the



Moscow Published by J. L. Sverdlov, London.

(676)

PYRETHRUM inodorum.

*Corn Feverfew. Scentless May-weed.*SYNGENESIA *Polygamia superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves sessile, pinnate, in many capillary segments. Stem branched, spreading. Crown of the seeds entire.

SYN. *Chrysanthemum inodorum.* *Linn. Sp. Pl.* 1253. *Wub.* 734. *Hull.* 184. *Relb. Suppl.* 1. 14. *Sibth.* 257. *Abbot.* 185.

Matricaria inodora. *Hudf.* 372.

Chamæmelum inodorum annuum humilius, foliis obscure virentibus. *Dill. in Raii Syn.* 186.

VERY common in fields and by way-sides, especially on a gravelly soil, flowering late in Autumn.

Root annual, tapering. Whole herb almost destitute of any peculiar smell. Stem branched, spreading, leafy, angular, smooth. Leaves sessile, pinnate in a lyrate manner: the leaflets cut into numerous, very narrow, smooth, segments, each tipped with a little point. Flowers terminal, solitary, large, on naked stalks. Disk yellow, convex. Radius of many spreading elliptic-oblong white obtuse florets, each tipped with 3 teeth. Scales of the calyx smooth, surrounded with an equal narrow brown membranous border. Receptacle conical, blunt, naked. Seeds crowned with a membranous undivided border. Mr. Crowe has observed a variety with a multiplied radius.

The naked receptacle easily distinguishes this plant from every *Anthem.*, and the crowned seeds from *Matricaria*. As the crown being entire, not lobed, if other marks were wanting, it may be known from *M. maritima*, another species of *Pyrethrum*. We cannot help adopting this genus from Haller and Gartner, as it is difficult to form any thing like natural genera in this order without adverting to the crown of the seed. The common Feverfew makes the third British species of *Pyrethrum*, having certainly the proper essential character, though Haller appears to have overlooked it.

(676)

PYRETHRUM inodorum.

Gray Fraxinea. Scribn. & May-weed.

FRAXINEAE Pyrethris fraxinea.

Gray. Desc. Flowers white. *Stems* crowned with a membranous sheath. *Leaves* hemispherical, imbricated with many scales, bordered with a membrane.

Scribn. Desc. *Leaves* ovate, ciliate, in many capillary segments. *Stem* branched, spreading. *Crown* of the stem is white.

Scribn. Description of inodorum. Lib. Sp. Pl. 1253. Fraxinea. Eng. 184. Rad. Suppl. 1. 14. Subst. 184. 184. 184.

Monarda inodora. Eng. 184.

Monarda inodora inodora humilis, foliis obtusis, ciliatis. Lib. in Rad. Syn. 186.

VERY common in fields and by waysides, especially on a hillside. *Flowering* in August.

Stems annual, branching. *Whole* plant almost destitute of any odor or taste. *Stems* branched, spreading. *Leaves*, angular,

676.



Helianthus divaricatus L.

PYRETHRUM maritimum.

Sea Feverfew.

SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves bipinnate, fleshy, awnless; convex above; keeled beneath. Crown of the seeds lobed.

SYN. *Pyrethrum maritimum.* *Sm. Fl. Brit.* 901.

Matricaria maritima. *Linn. Sp. Pl.* 1256. *Ligbtf.* 491.
With. 736. *Hull.* 184.

M. inodora γ. *Huds.* 373.

Chamæmelum maritimum perenne humilius, foliis brevibus crassius, obscurè virentibus. *Dill. in Rar. Syn.* 186. t. 7. f. 1.

OUR specimen of this rare plant was gathered by the late John Adams, Esq. in the loose sand of the shore of Manorbia bay, about 6 miles from Pembroke. Mr. Robson has favoured us with others from Durham. It is perennial, and flowers about July or August.

Several stems, various in length, spread on the ground, forming a sort of tuft, being thickly clothed with leaves, though not much branched. They are smooth, shining, mostly purplish. Leaves sessile, doubly pinnate, of a rather dark and shining green, fleshy; the segments short, blunt, destitute of any terminal awns, convex above, and more so beneath. Flowers terminal, solitary, not quite so large as those of *P. inodorum*, t. 676. Calyx smooth, its scales bordered with a very narrow blackish membrane. Disk convex, yellow, broader in proportion to the radius than in *P. inodorum*, from which species this still more essentially differs in having the crown of the seed divided into 3 or 4 lobes. The whole herb is slightly aromatic, and unquestionably distinct from *P. inodorum*, with which Hudson confounds it.



PYRETHRUM maritimum.

*Sea Feverfew.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves bipinnate, fleshy, awnless; convex above; keeled beneath. Crown of the seeds lobed.

SYS. *Pyrethrum maritimum.* *Sm. Fl. Brit.* 901.

Matricaria maritima. *Leon. Sp. Pl.* 1256. *Lichtf.* 491.
Wish. 736. *Hall.* 184.

M. inodora γ. *Huds.* 373.

Chamaemelum maritimum perenne humiliss, foliis brevibus crassius, obscure virentibus. *Dill. in Raii Syn.* 136. t. 7. f. 1.

One specimen of this rare plant was gathered by the late John Adams, Esq. in the loose sand of the shore of Manorbia Bay, about 2 miles from Penzance. Mr. Robson has favoured us with others from Duchan. It is perennial, and flowers about July or August.



Fig. 1. Hec. Polypod. by J. L. Sowerby. London.





[1232]

MATRICARIA Chamomilla.

*Wild Chamomile.*SYNGENESIA *Polygonia-sperfolia.*

GEN. CHAR. *Recept.* naked, almost cylindrical. *Seeds* without a crown. *Cal.* flattish, imbricated with membranous-bordered scales.

SPEC. CHAR. Leaves smooth, pinnated; leaflets linear, simple or divided. Radius spreading. Scales of the calyx dilated.

SYS. *Matricaria Chamomilla.* *Lin.* *Sp. Pl.* 1236.
Sm. Fl. Brit. 902. *Huds.* 372. *With.* 736.
Hall. 194. *Reih.* 335. *Sith.* 258. *Attot.* 185.
Curt. Lond. fasc. 5. t. 63. *Mart. Fl. Rust. t. 74.*
Chamæmelum. *Raii Syn.* 184.

THIS weed is much more plentiful about London, where it grows in fields, waste ground, about road sides and on dung-hills, than in Norfolk, where it rarely occurs.

The root is fibrous and annual. Stem about a foot high,





Nov. 2. 1800. Published by J. G. Smith, London.

[2370]

ANTHEMIS *maritima*.*Sea Chamomile.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemispherical, nearly equal. *Florets* of the radius more than five, oblong.

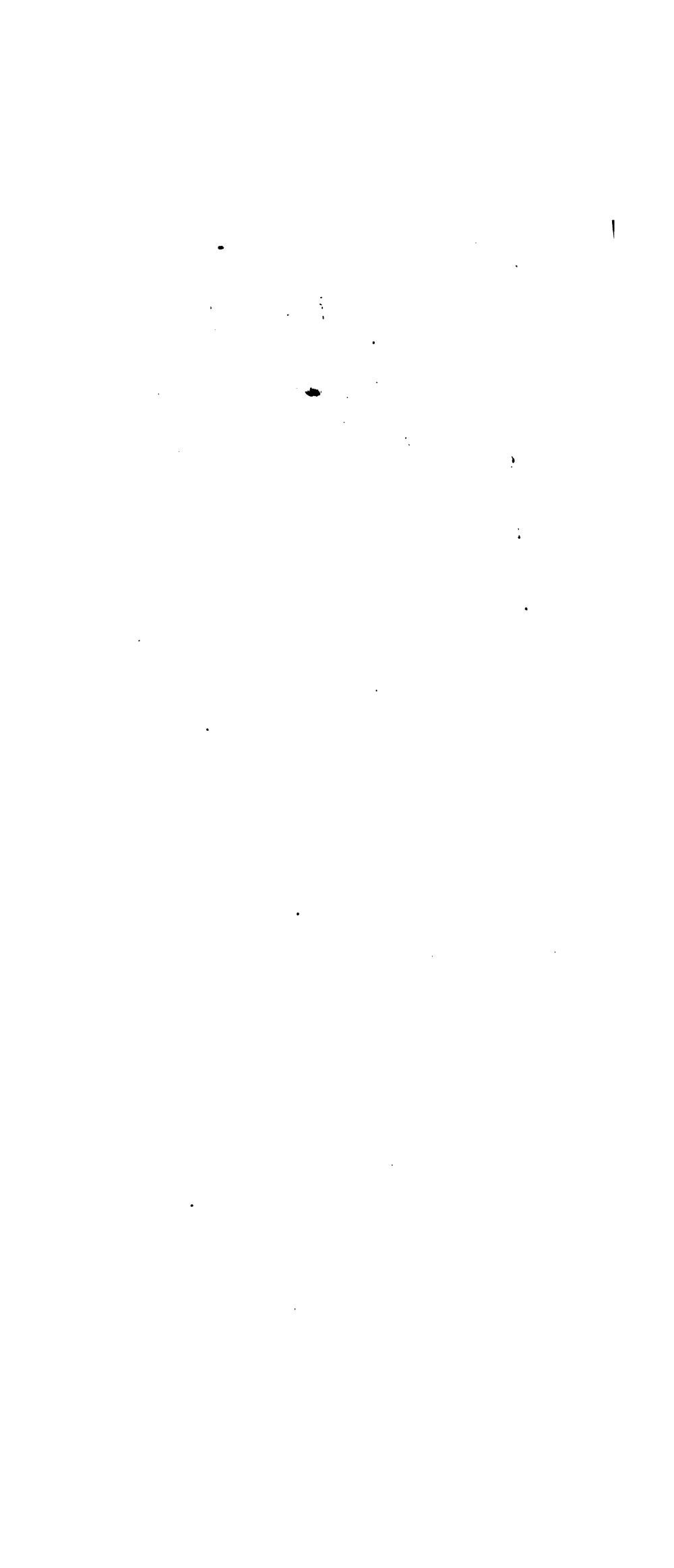
SPEC. CHAR. Leaves doubly pinnatifid, acute, fleshy, somewhat hairy. Stem prostrate. Calyx slightly downy.

SYN. *Anthemis maritima.* *Linn. Sp. Pl.* 1259. *Sm. Fl. Brit.* 904. *Huds.* 374. *With.* 740. *Hull. ed.* 2. 246. *Phelps Calend.* 136.

Chamæmelum maritimum latifolium ramosissimum, flore albo. *Dill. in Raii Syn.* 186.

A NATIVE of the sea shore in rocky or stony places, but of rare occurrence. Mr. Robson favoured us with a wild specimen from Sunderland, Durham, and our figure has been assisted by one from a garden. The plant is annual, flowering in July.

The stems grow prostrate, in a circular position, and are from 6 to 12 inches long, angular, leafy, hoary, sometimes purplish; branched and bearing several flowers. Leaves sessile, alternate, fleshy, most hairy beneath, cut into many sharp pinnatifid segments, flat on the upper side. Flowers solitary, on terminal, downy, swelling stalks. Calyx hemispherical, its scales torn and almost feathery, invested with a few fine hairs. Disk flat, yellow, the sharp chaffy scales of the receptacle rising above the unopened florets; radius of many white, spreading, slightly toothed, oblong florets. Seeds crowned with a narrow entire border. The flowers smell like Tansy, the leaves like Mugwort. The scales of the receptacle distinguish it at once from *Pyrethrum maritimum*, t. 979, not to mention the hoariness of the herbage.



[2370]

ANTHEMIS *maritima*.*See Chamomile.***SYNGENESA** *Polygonia-sperfolia*.

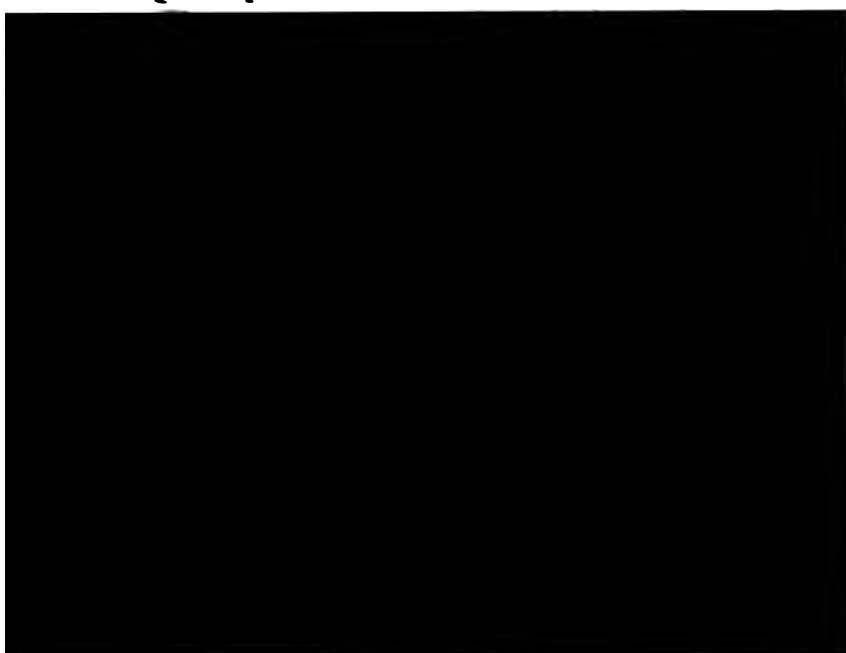
GEN. CHAR. Recept. chaffy. Seeds scarcely bordered.
 Cal. hemispherical, nearly equal. Florets of the
 radius more than five, oblong.

SPER. CHAR. Leaves doubly pinnatifid, acute, fleshy,
 somewhat hairy. Stem prostrate. Calyx slightly
 downy.

SEX. *Anthemis maritima*. *Linn. Sp. Pl.* 1259. *Sm.*
Fl. Bræ. 904. *Huds.* 374. *With.* 740. *Hull*
ed. 2. 246. *Phelps Calend.* 136.

Chamaecleon maritimum latifolium ramosissimum,
flore albo. *Dill. in Raii Syn.* 186.

A NATIVE of the sea shore in rocky or stony places, but
 of rare occurrence. Mr. Robson favoured us with a wild spe-
 cimen from Sunderland, Durham, and our figure has been
 assisted by one from a garden. The plant is annual, flower-
 ing in July.





Juncea pallidula by J. L. Smith

ANTHEMIS nobilis.

*Common Chamomile.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered.
Cal. hemisphærical, nearly equal. *Florets* of the
 radius more than 5, oblong.

SPEC. CHAR. Leaves doubly pinnate, thread-shaped,
 acute, a little downy. Scales of the receptacle
 membranous, scarcely so long as the florets.

SYN. *Anthemis nobilis.* *Linn. Sp. Pl.* 1260. *Sm. Fl.*
Brit. 904. *Huds.* 373. *With.* 739. *Hull.* 188.
Sibth. 258. *Woodv. Med. Bot.* t. 103.

Chamæmelum odoratissimum repens, flore simplici.
Raii Syn. 185.

THE fragrant Chamomile, so useful as a stomachic medicine, is not generally met with wild. We gathered this specimen a little to the south of Lowestoft church, Suffolk, in August last. It always grows on gravelly open commons, spreading close to the earth, and forming considerable patches among the short herbage of such places. When not in flower its scent betrays it if trodden upon. This quality has induced some curious people to plant Chamomile for a green walk in gardens, for which purpose it is recommended by great beauty and richness of foliage, but receives injury from being walked on in frosty weather.

Root perennial, strong. Stems prostrate, branched, villous. Leaves bipinnate, hairy or downy; leaflets slender, cylindrical, entire or lobed. Flowers terminal, solitary, white with a yellow disk, which in time becomes conical. Seeds very obscurely margined. Scales of the receptacle lanceolate, thin, not rising above the florets. The whole plant is intensely bitter, with a peculiar but agreeable smell. In gardens it is generally double, the florets of the disk being all like those of the radius; but such flowers are not reckoned so strong in flavour as the natural ones.



HYPERICUM ADRIAN.

Hypericum adrianum.

Hypericum adrianum.

Stems erect, branched. Leaves linearly bordered.
Flowers of the
corolla tube 5-lobed.

Stems erect, branched. Leaves linearly bordered, thread-shaped,
linearly bordered. Stems of the receptacle
linearly bordered, linearly bordered as the florets.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.

Hypericum adrianum Linn. Sy. P. 1250. Sm. Fl.
This species is a diaphanous medicinal
plant, and is used with wine. We gathered this
species in the garden of Lowland Church, Suffolk, in
1811. It always grows in gravelly open commons,
and forming considerable patches
along the coast margin of inland places. When not in
flower it is most abundant if broken open. This quality has









[1772]

ANTHEMIS *Cotula*.

Stinking Mayweed or Chamomile.

SYNGENESIA *Polygamia-superflua*.

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemispherical, nearly equal. *Florets* of the radius more than 5, oblong.

SPEC. CHAR. *Receptacle* conical; its scales bristle-shaped. *Seeds* without any border. *Leaves* doubly pinnatifid, smoothish.

SYN. *Anthemis Cotula*. *Linn. Sp. Pl.* 1261. *Sm. Fl. Brit.* 906. *Huds.* 373. *With.* 738. *Hull.* 188. *Relh.* 336. *Sibth.* 259. *Abbot.* 186. *Curt. Lond. fasc. 5. t. 61.*

Chamæmelum foetidum. Raii Syn. 185.

WE have alluded to this disagreeable weed in describing *A. arvensis*, t. 602, a much rarer plant. *A. Cotula* is one of the most common of this tribe, in fields and waste ground, flowering from July to September, and is known by the strong scent and acrimony of its herbage and blossoms.

Root annual, small. Stem upright, much branched, leafy, smooth, many-flowered. Leaves alternate, sessile, doubly pinnatifid, cut, narrow, flat, bright green, nearly or quite smooth. Calyx more or less hairy, with narrow, slightly bordered, scales. Disk of the flowers lemon-coloured, convex. Rays white, numerous, elliptical, 3-toothed, reflexed at night. Seeds obovate, furrowed, roughish, quite destitute of any crown or border. Receptacle not merely conical, but almost cylindrical, beset with narrow bristle-like scales, which are shorter than the florets.

[1772]

ANTHEMIS Cotula.

Stinking Mayweed or Chamomile.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemispherical, nearly equal. *Florets* of the radius more than 5, oblong.

SPEC. CHAR. Receptacle conical; its scales bristle-shaped. Seeds without any border. Leaves doubly pinnatifid, smoothish.

SYN. Anthemis Cotula. *Linna. Sp. Pl.* 1261. *Sm. Fl. Brit.* 906. *Huds.* 373. *With.* 738. *Hull.* 188. *Relk.* 336. *Sitch.* 259. *Abbot.* 186. *Curt. Lond. fasc.* 5. t. 61.

Chamæmelum foetidum. Rati Syn. 185.

WE have alluded to this disagreeable weed in describing



1772



Agrostis, Publikaal by de L. J. van der Loo.

ANTHEMIS tinctoria.

*Ox-eye Chamomile.**SYNGENESIA Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemispherical, nearly equal. *Florets* of the radius more than 5, oblong.

SPEC. CHAR. Leaves doubly pinnatifid, serrated, downy underneath. Stem corymbose, erect.

SYN. *Anthemis tinctoria.* *Linn. Sp. Pl.* 1263. *Sm. Fl. Brit.* 907. *Huds.* 374. *With.* 740. *Hull.* 189. *Dicks. H. Sicc. fasc.* 17. 17. *Don. Herb. fasc.* 2. 42. *Fl. Dan. t.* 741.

Bupthalmum vulgare. *Raii Syn.* 183.

FOUND here and there in fields and stony places, but not frequently. In Ray's time it was observed in the county of Durham. Mr. Dickson has, more recently, gathered it in Essex, and Mr. G. Don near Forfar. In curious gardens it is preserved for its rarity.

We are not sure that the root is more than biennial: hence, perhaps the plant is so little stationary as, by the accounts of those who have sought for it, seems to be the case. Stem bushy, corymbose, a foot or two in height, angular, cottony. Leaves doubly pinnatifid, deeply and sharply serrated, fine, downy beneath. Flowers on solitary terminal woolly stalks. Calyx hemispherical, with jagged cottony scales. Florets of both disc and radius of a rich golden yellow, the latter broad and elliptical. Scales as long as the tubular florets, yellow, awl-shaped, dilated at the base.

The flowers are said to afford a fine yellow dye.



2472



Fig. 2. 1865. Published by J. L. Sowerby, London.







ACHILLEA serrata.

*Serrated Yarrow.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the radius 5 to 10, roundish, or inversely heart-shaped.

SPEC. CHAR. Leaves linear-lanceolate, sessile, downy, deeply serrated; laciniated at the base. *Corymbs* nearly simple.

SYN. *Achillea serrata.* *Retz. Obs. fasc. 2. 25. Ait. Hort. Kew. ed. 1. v. 3. 241. Willd. Sp. Pl. v. 3. 2194.*

Dracunculus alpinus, agerati foliis incanis. Raii Hist. v. 1. 344.

IN the year 1802 we received specimens of this *Achillea*, gathered wild not far from Matlock, Derbyshire, by Mr. Rupp of Manchester and Mr. Williams of Norton, near Sheffield. Being no Linnæan species, nor in any way known to us, we have kept it long unpublished; but a further search has helped us to the above synonyms. This has possibly been overlooked in England, as well as in Switzerland, for a variety of *A. Ptarmica*, t. 757. There is no probability of its having escaped from gardens, being scarcely known, except in a few of the most curious. The flowers expand about August, and the root is perennial. The whole herb has the habit and strong scent of the garden *A. Ageratum*, but the deeply-cut radiating base of the leaves is considerably different, and the flowers are totally unlike, those of *Ageratum* being not one fifth so large, and extremely numerous, in repeatedly compound corymbs, of a more yellow colour. The flowers of our present plant are more like *Ptarmica*, but smaller and of a yellowish hue. Willdenow reports it a native of Switzerland. Can Haller have confounded it under his n. 117 γ? We have never met with a Swiss specimen. Ray says he cultivated this species at Cambridge, having received it from London. His description cannot be mistaken.

ACHILLEA serrata.

*Serrated Yarrow.*SYNGENESIA *Polygonia-sperfolia*.

GEN. CHAR. *Recept.* chaffy. *Disk* none. *Cal.* ovate, imbricated, unequal. *Fillets* of the radius 5 to 10, roundish, or inversely heart-shaped.

SPEC. CHAR. Leaves linear-lanceolate, sessile, downy, deeply serrated: incised at the base. *Corymbs* nearly simple.

SEX. *Achillea serrata*. *Renz. Obs. fasc.* 2. 25. *Ait. Hort. Kew. ed.* 1. v. 3. 241. *Willd. Sp. Pl.* 1. 3. 2194.

Dianthus alpinus, agerati foliis incanis. *Ran. Flaz.* v. 1. 344.

IN the year 1802 we received specimens of this *Achillea*, gathered with us in from Matlock, Derbyshire, by Mr. Rupp of Manchester and Mr. Williams of Norton, near Sheffield. Being an unknown species, and in any way known to us, we have kept it long unpublished: but a further search has helped us to the above synonymy. This has possibly been overlooked in England,



Sp. 1. var. pubescens (L.) Gussone

ACHILLEA Millefolium.

*Common Yarrow; or Milfoil.*SYNGENESIA *Polygamia-superflua.*

GEN. CHAR. *Recept.* chaffy. *Down* none. *Cal.* ovate, imbricated, unequal. *Florets* of the *radius* 5 to 10, roundish, or inversely heart-shaped.

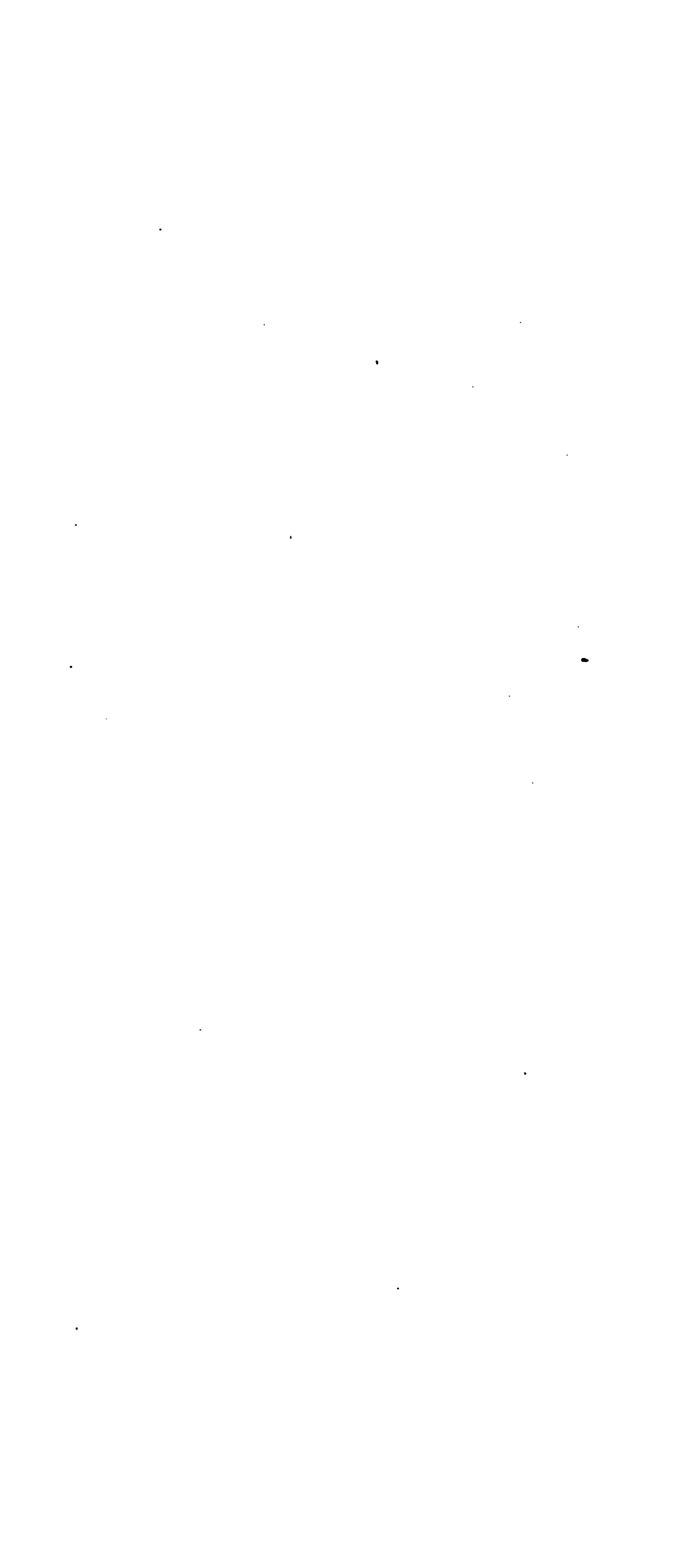
SPEC. CHAR. Leaves doubly pinnatifid, hairy; their segments linear, toothed, pointed. Stems furrowed.

SYN. *Achillea Millefolium.* *Linn. Sp. Pl.* 1267. *Sm. Fl. Brit.* 908. *Huds.* 374. *With.* 742. *Hull.* 189. *Relb.* 324. *Sibth.* 259. *Abbot.* 186. *Curt. Lond. fasc.* 6. t. 61. *Mart. Fl. Russ.* t. 123. *Woodv. Med. Bot.* t. 64.

Millefolium vulgare. *Raii Syn.* 183.

COMMON every where in pastures, flowering from June to August, and the creeping perennial root is as difficult to be extirpated as that of *A. Ptarmica*. The young subterraneous shoots are white, smooth and tender, with a pungent, not unpleasant flavour. The whole herb above-ground is more or less pilose or hairy, and when bruised proves aromatic and somewhat astringent. It has been recommended for curing external wounds, and internal hæmorrhages, but is not used by regular practitioners in this country. Linnæus says, the miserable inhabitants of Dalecarlia, the mining province of Sweden, infuse it in their beer during the fermentation, to increase its intoxicating effects. Our public brewers are acquainted with too many foreign adulterations to need this, and the dishonest ones too often have recourse to them, notwithstanding the many wise prohibitions of our legislature; for their villainous gains enable them to defy the penalties.

The Yarrow cannot be confounded with any other British plant. Its compound leaves distinguish it from that last described, as well as its much smaller flowers, which, though generally white, often have a reddish or even purple radius, and become not unornamental.



ACHILLEA Millefolium.

Common Fennel; or Mefil.

ACHILLEA Folium bipinn.

GERM. CHAM. *Large chamf.* *Drum zone.* *Cal.* ovate, imbricated, unequal. *Fls.* of the *radius* 5 to 10, tubulose, or somewhat heart-shaped.

FRANC. CHAM. *Leaves mostly pinnatifid, hairy; their ligaments linear, rounded, pointed. Stems furrowed.*

FRANC. ACHILLEA Millefolium. *Lea. Sp. Pl.* 1267. *Sm.*

F. Br. 103. Hud. 374. Wats. 742. Hull. 189.

Roth. 124. Sibth. 154. Linn. 186. Curt. Lond.

Phil. 1. 1. 1. Mart. F. Exf. 1. 123. Woods. Med.

Bot. 1. 1.

Millefolium vulgare. *Lat. Sp.* 183.

COMMON every where in pastures, flowering from June to August, and the creeping perennial root is as difficult to be exterminated as that of *A. Farnesiae*. The young subterraneous leaves are white, imbricated and tender, with a pungent, not unpleasant flavour. The whole herb above-ground is more or less white or hoary, and when bruised proves aromatic and some-



ACHILLEA tomentosa.

*Woolly Yellow Mulfoil, or Yarrow.**SYNGENESA Polygonia-cyperiflora.*

GEN. CHAR. *Recept. chaffy. Down none. Cal. ovate, imbricated, unequal. Florets of the radius 5 to 10, roundish, or inversely heart-shaped.*

SPEC. CHAR. *Leaves doubly pinnatifid, woolly; segments crowded, linear, acute. Corymbs repeatedly compound.*

SYN. *Achillea tomentosa. Linn. Sp. Pl. 1264. Willd. Sp. Pl. v. 3. 2209. Curt. Mag. t. 498.*

Millefolium luteum. Ger. em. 1073.

ANOTHER new *Achillea*, here presented to the British botanist, has been sent us from the west of Scotland, several years since, by Mr. Hopkirk of Paisley, near Glasgow, as well as from Ireland more recently. It grows in open sunny hilly pastures, flowering in the latter part of summer; and being frequent in Switzerland, France, Italy, and the north-eastern part of Europe, we do not question its being wild in the places reported.

This species is of humbler stature than the Common Yarrow, t. 758, its foliage less cut, and more woolly. The flowers are of a golden yellow, their stalks woolly, repeatedly compound and corymbose. It is a desirable plant for rock-work in gardens.

2532.



Sp. repens L. f. pinnatifida



[1678]

CENTAUREA Jacea.

*Brown or Radiated Knapweed.*SYNGENESIA *Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx membranous, torn; the lower ones pinnatifid. Leaves linear-lanceolate; the radical ones broader and toothed. Branches angular.

SYN. *Centaurea Jacea*. *Linn. Sp. Pl.* 1293. *Fl. Suec.* 300. *Jacea*. *Tillands. Ic.* 111.

THE knowledge of our native plants is not yet so complete but that something new may still be expected to reward the curious inquirer, even exclusive of the class *Cryptogamia*. Mr. W. Borrer has found in Sussex the true *Centaurea Jacea* of Linnæus, of which we have already spoken, v. 4. 278, as distinct from *nigra*, but which we did not then know to be a native of Britain. On the continent it seems the more common of the two; and yet we can scarcely find a certain figure of it, except in the rare old Swedish work of Tillands. The figure in *Ger. em.* 727, under *Jacea nigra*, is the very same cut with that in Paullis *Fl. Dan.*, which Linnæus quotes for his *C. Jacea*; but it is surely more like *C. nigra*, to which also the *J. nigra pratensis latifolia* of Baubin seems to belong rather than to *C. Jacea*. In all this uncertainty our plate cannot be unacceptable.

Mr. Borrer's specimens agree precisely with the Swedish ones of Linnæus, and differ from *C. nigra* in having much narrower and sharper leaves, (the radical ones being toothed, and sometimes laciniated,) and radiant flowers; more especially in the calyx-scales being pale brown, membranous and shining; the uppermost rounded at the top and almost entire; the rest with a thin whitish jagged pinnatifid margin, totally different from the black-fringed scales of *C. nigra*. The plant is perennial, and flowers in August and September.

1678



Stachys Published by J. Smith, London.



CENTAUREA nigra.

*Black or lesser Knapweed.*SYNGENESIA *Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx oval, ciliated with upright capillary teeth. Lower leaves lyrate-angulated; upper ones ovate. Flowers without a radius.

SYN. *Centaurea nigra.* Linn. *Sp. Pl.* 1288. *Huds. Fl. An.* 375. *With. Bot. Arr.* 943. *Relh. Cant.* 325. *Sibth. Oxon.* 260.

Jacea nigra. *Raii Syn.* 198.

Jacea. *Hall. Hist.* No. 184.

COMMON in pastures and by road sides every where, flowering from June to the end of August. The root is strong and perennial, somewhat creeping. Stems very rigid and hard, angular, about 2 feet high. Lower leaves lanceolate, toothed, many of them cut into angular lobes so as to become lyrate; the upper ones are ovate and entire; all of them alternate, but a little clustered under the flowers, which are terminal, solitary, red, consisting of hermaphrodite florets only without any radius. Scales of the calyx very black, finely pectinated, erect. Seed without any down.

Much confusion reigns in the synonyms of this species. Mr. Hudson at first took it for the *C. Jacea* of Linnæus, but corrected himself in his 2d edition, and the Linnæan Herbarium confirms his last opinion. We think with him that Bauhin's *Jacea nigra pratensis latifolia* must certainly be the plant before us. The true Linnæan *C. Jacea*, found in Sweden, is essentially different in having the calyx-scales much paler, membranous, lacinated but not ciliated, and the flowers radiated. This should seem to be Haller's No. 185, which Hudson quotes as a variety of his *nigra*, but erroneously; for though our *nigra* may occasionally acquire a radius, it remains still truly distinct from the *Jacea* in the calyx, as well as in having much broader leaves. Dillenius seems to have been well acquainted with the two species; see his note in *Raii Syn.* 199.



Scrophularia perfoliata L.



CENTAUREA Cyanus.

*Corn Blue-bottle.*SYNGENESIA *Polygamia frustranea.*

GEN. CHAR. *Recept.* bristly. *Seed-down* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Scales of the calyx serrated. Leaves linear, entire; the lowermost dentated.

SYN. *Centaurea Cyanus.* *Linn. Sp. Pl.* 1289. *Huds. Fl. An.* 375. *With. Bot. Arr.* 944. *Relh. Cant.* 325. *Sibth. Oxon.* 260. *Curt. Lond. fasc.* 6. t. 62. *Cyanus. Raii Syn.* 198.

THIS is a common weed in corn-fields, flowering about midsummer, or later, and sufficiently obvious to every body. Its white or dark purple varieties, being of rare occurrence, are admitted into the flower garden, though really less beautiful than the natural sky-blue of the wild flower.

The root is small and annual. Stem 2 or 3 feet high, erect, harsh, angular, hollow, alternately and copiously branched, clothed with scattered lanceolate leaves, which are of a light greyish green, beneath somewhat cottony, ribbed, entire, the lower ones only being generally, though not infallibly, toothed; but the radical leaves are entire. A solitary flower terminates each branch, the scales of whose calyx are serrated with brown indentations. *Corollæ* of the radius bright blue; those of the disk smaller and purplish. The seeds are small and polished, with a short wing or crown.

A blue water-colour is easily prepared from the expressed juice of these flowers mixed with a little cold alum water. This blue is however reported to be not permanent. By way of experiment we have coloured with it the separate floret at the bottom of our plate, as we have already found it last several weeks, and think it may probably be durable enough if not exposed to light.





CENTAUREA Scabiosa.

Greater Knapweed.

SYNGENESIA *Polygamia frustranea.*

GEN. CHAR. *Receptacle* bristly. *Seed-wing* simple. *Corollæ* of the radius funnel-shaped, irregular, longer than those of the disk.

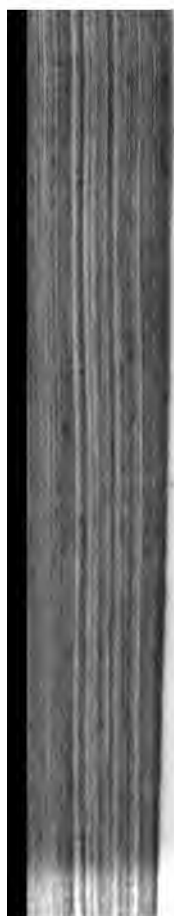
SPEC. CHAR. Scales of the calyx fringed. Leaves pinnatifid, their segments lanceolate.

SYN. *Centaurea Scabiosa*. *Linn. Sp. Pl.* 1291. *Hudf. Fl. An.* 376. *With. Bot. Arr.* 945. *Relb. Cant.* 326. *Jacea major.* *Raii Syn.* 198.

THE root is perennial. Stem about two feet high, erect, alternately branched, leafy, bearing at the end of each branch a solitary flower, the scales of whose calyx are triangular, acute, and ciliated or rather pectinated in the margin.

The greater knapweed grows throughout England, more rarely in Scotland, in the borders of fields, in meadows, by road-sides, and sometimes among corn, flowering in July and August. Ray says the flowers are sometimes white. We do not know of its being applied to any æconomical use. Small birds eat the seeds in winter. The permanent calyx in time becomes reflexed, and is very conspicuous at a distance, being of a most beautiful silvery hue.







Non republika by J. L. L. L. L.





CENTAUREA Calcitrapa.

*Star Thistle.*SYNGENESIA *Polygamia-frustranea.*

GEN. CHAR. *Receptacle* bristly. *Dorsn* simple. *Cor.* of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Flowers sessile. Calyx with compound spines. Leaves pinnatifid, with narrow dentated segments. Stem hairy.

SYN. *Centaurea Calcitrapa.* *Linn. Sp. Pl.* 1297. *Huds. Fl. An.* 376. *With. Bot. Arr.* 946. *Relb. Cant.* 326. *Carduus fiellatus.* *Rail Syn.* 196.

FOUND not infrequently in a barren gravelly or sandy soil in waste ground, by road sides, and similar places, beginning to flower about Midsummer, and continuing in blossom till destroyed by cold, being rather tender, when it becomes bleached and blown about by the wind, dispersing its seeds as it goes.

From one annual root arises a low, much branched, and







CENTAUREA foliitialis.

*St. Barnaby's Thistle.*SYNGENESIA *Polygamia frustranea.*

GEN. CHAR. Receptacle bristly. Seed-down simple. Cor. of the radius funnel-shaped, irregular, longer than those of the disk.

SPEC. CHAR. Flowers solitary. Calyx doubly spinous. Stem-leaves decurrent, without spines, lanceolate; radical ones lyrato-pinnatifid.

SYN. *Centaurea foliitialis*. Linn. Sp. Pl. 1297. Hudf. Fl. An. 377. With. Bot. Arr. 946. Smith Tr. of Linn. Soc. v. 2. 236.

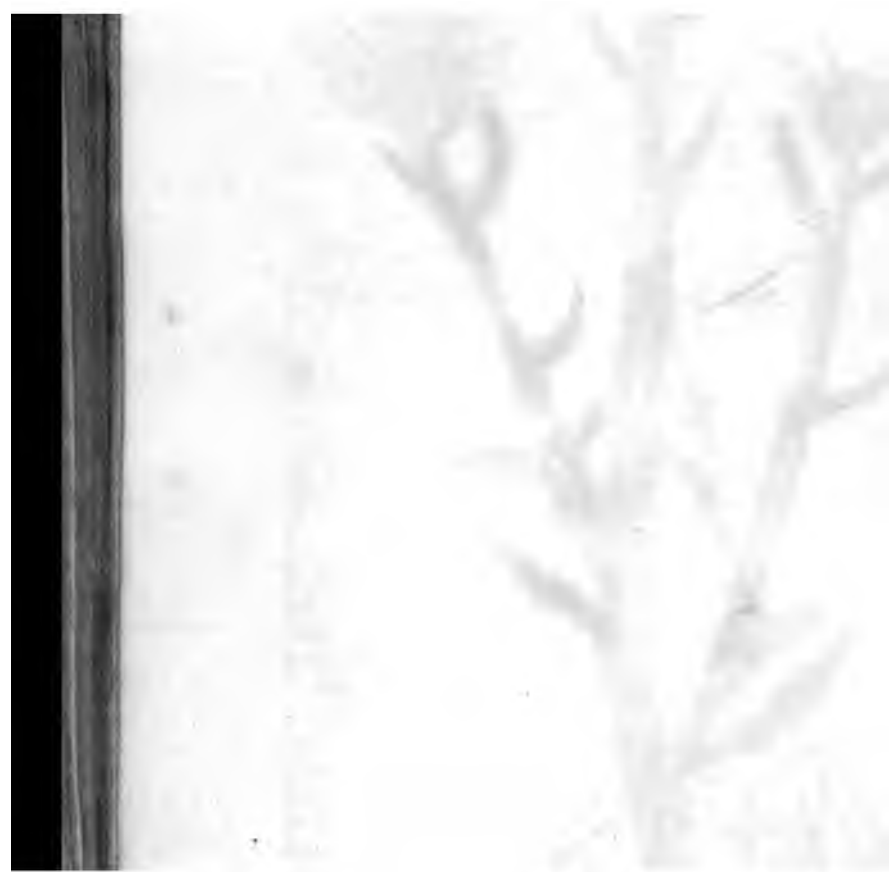
Carduus stellatus luteus foliis Cyani. Rati Syn. 196.

Yellow Thistle. Petiver Herb. Brit. t. 21. f. 12.

DISCOVERED by Mr. Crowe in a field at Arminghall near Norwich, see Linn. Soc. Transf. above quoted. Upon mature consideration we have no doubt of this being the real plant of Ray and Hudson, more particularly as it is that of Petiver, who in this case is the best and oldest authority we can find. His figure is evidently *C. foliitialis*, and not *melitenfis*. The plant has of late been sought in vain about Cirencester; and being so very rare a native, we now venture to present the public with a figure which, though taken from a garden specimen (Mr. Crowe's being deformed and damaged), perfectly exhibits the true habit of the species when wild.

The root is annual whitish. Stem near two feet high, alternately branched, winged from the decurrent leaves, which are lanceolate and entire, slightly waved; the radical leaves are 4 or 5 inches long, lyrate, the lobes alternate, acute, the terminal one large, and more or less triangular. Flowers solitary at the end of each branch, bright yellow. Scales of the calyx tipped with palmated yellowish spines, of which the central one is very long, strong, and different from the rest. The whole herb is harsh and rigid, but clothed with a cotton-like web (as is the calyx), somewhat viscid, and intensely bitter. It flowers about Midsummer, whence the name; but lasts till late in autumn, and in the south of Europe even till December.





13

